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A Summary of the Observed 1983-84 Greenland Halibut Fisheries in NAFO Subareas 0, 2 and 3

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Canadian Industry Report of
Fisheries and Aquatic Sciences 171

MAY 1986

A SUMMARY OF THE OBSERVED 1983-84 GREENLAND HALIBUT FISHERIES IN NAFO SUBAREAS 0, 2 and 3

by

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ABSTRACT

Kulka, D. W. 1986. A summary of the observed 1983-84 Greenland halibut fisheries in NAFO Subareas 0, 2 and 3. Can. Ind. Rep. Fish. Aquat. Sci. 171: iv + 240 p.

In order to determine if the Canadian offshore fleet has been exploitating the Greenland halibut resource effectively, current fishing patterns for all countries were compared against depth and area specific catch rates, and levels of by-catch. Effort location and associated catches by Canada were found to be fairly similar to those of other countries. However, an average depth of 473 m fished by Canada in 1983 and 529 m in 1984 for otter trawl gear was somewhat shallower than the area of optimum returns in terms of high catch rate and low by-catch. The most effective pattern of fishing coincided with depths greater than 400 m (550 m average) mainly in the deep trenches of unit areas 212, 213, and 216 between the months of July and December. The exception was a small area in Hawke Channel (unit areas 202 and 207) at a shallower average depth of 300 m where catch rates were high. However, excessive by-catch tended to be a problem here. For fishing grounds currently not exploited by Canada, effort along the edge of the continental shelf in unit areas 213, 216 and 219 (900-1150 m) yielded relatively good catches. It is estimated that Canada could improve its catch per unit effort by about 25% if fishing was restricted to the above mentioned effort locations.

RÉSUMÉ

Kulka, D. W. 1986. A summary of the observed 1983-84 Greenland halibut fisheries in NAFO Subareas 0, 2 and 3. Can. Ind. Rep. Fish. Aquat. Sci. 171: iv + 240 p.

Afin de déterminer si la flottille hauturière canadienne a exploité efficacement les stocks de flétan du Groenland, on a comparé les modes actuels de pêche pour tous les pays par rapport aux taux de capture selon la profondeur et le secteur et les niveaux des prises accidentelles. On a trouvé que l'endroit où s'exerce l'effort de pêche et les prises connexes par le Canada étaient assez semblables à ceux d'autres pays. Cependant, la profondeur moyenne de 473 m en 1983 et de 529 m en 1984 à laquelle le Canada a pêché avec les chaluts à panneaux était un peu plus faible que la zone de rendement optimal en termes de taux élevé de captures et de prises accidentelles faibles. Le mode de pêche le plus efficace a coïncidé avec des profondeurs supérieures à 400 m (moyenne de 550 m) surtout dans les fosses profondes des secteurs 212, 213 et 216 entre les mois de juillet et de décembre. Il y a eu une exception, soit une petite zone dans le chenal Hawke (secteurs 202 et 207) où les taux de capture ont été élevés à une profondeur moyenne plus faible de 300 m. Cependent, des prises accidentelles excessives avaient tendace à constituer un problème à cet endroit. Pour ce qui est des lieux de pêche non exploités actuellement par le Canada, l'effort de pêche en bordure de la plate-forme continentale dans les secteurs 213, 216 et 219 (900-1550 m) a permis d'obtenir des prises relativement bonnes. On estime que le Canada pourrait accroître ses prises par unité d'effort d'environ 25% si la pêche était limitée aux endroits susmentionnés où s'exerce l'effort de pêche.

INTRODUCTION

In recent years while the Greenland halibut stock seems to have increased (Bowering and Brodie 1985) it has been underutilized by the Canadian fleet. This is reflected in the substantial amount of Canadian quota that remains untaken each year. Assuming that the resource is of value to the fishing industry, then an ineffective pattern of exploitation may be contributing to its underutilization. Therefore, an examination of the 1983-84 fishery, by country, month, area, and depth was done in order to determine if the Canadian fleet was exploiting the stock effectively. To this end, examination of current fishing patterns with respect to area specific catch rates and bycatch was felt to be the best method for determining the location of the best fishing grounds. Effort locations and associated catch statistics for all countries were considered in the analysis as a more complete source of information with respect to fishable concentrations given that Canada appeared to be restricted to certain areas. Observer data were able to provide the appropriate level of detail for all countries. It contained specific effort locations for both otter trawl and gillnet gear with detailed catch composition by set. The purpose of the analysis is to put forward a more effective exploitation strategy based on observations of the whole Greenland halibut fishery.

METHODS

Detailed catch and effort data were collected on a set by set basis for 36% of the Canadian and 83% of the reported foreign fisheries in 1983 and 1984, by standard methods (Kulka and Firth 1985). From the gillnet and otter trawl directed fisheries, observed sets were separated and sorted by country, month, unit area, and 50 m depth intervals (unit areas numerically coded are illustrated in Fig. 5 and 6). For each category separately and for various amalgamated groupings, catch rates and by-catch levels were defined. Various combinations of effort location were examined to delineate areas of best fishing. Pie charts were drawn to graphically illustrate by-catch with respect to location. Plots of catch rate versus depth were used to identify optimum fishing depth for the target species in terms of catch rate, for specific areas, seasons, and combined seasons and areas. These data were then compared against actual total effort location in 1983-84 and areal charts were produced to show where "best" fishing occurred.

RESULTS AND CONCLUSIONS

Tables 1a and b for the 1983 and 1984 otter trawl fisheries and 1c and d for the corresponding gillnet fisheries list by country, month, and unit area, a detailed breakdown of observed catch and catch rates, minor species included. They also provide average bottom depth fished. N-sets, referring to the number of sets observed to contain the corresponding species provided a measure of observed effort level within each subcategory.

The offshore Greenland halibut fishery was found to extend over a wide latitude from 63°N to 48°N, and over depths ranging from 200 to 1150 m. However, 63% of the fishing effort in terms of number of sets occurred in the 300 to 500 m range for otter trawl gear and 100% in 200 to 300 m for gillnets. The latter constituted a charter fishery and was confined to a small area in NAFO Div. 2J where catch rates and by-catches (mainly cod) were relatively constant. Gillnet effort was centered in unit areas 202, 203, and 207 during the fall. The otter trawl data however, indicated considerable variation among areas with respect to amount of effort, catch composition and catch rates. Although Greenland halibut were fished by otter trawl in 17 unit areas between May and February in 1983 and 15 between May and December in 1984, only about 50% of this fishery mainly to the north, resulted in high catch rates and low by-catch.

Figures 1 and 2 for 1983 and 1984 respectively, show catch composition by country, unit area and month. For otter trawl fishery, the level and composition of by-catch was highly variable. Principal by-catches, summarized in Table 2 for both gears illustrates that problem areas were located mainly to the south and offshore with witch, cod and redfish making up the bulk. Other redfish making up the bulk. Other species such as plaice, grenadier and skate were a problem only in specific and restricted areas.

Figures 3 and 4, for 1983 and 1984 respectively show average catch rates from the directed fishery at 50 m depth intervals. The general depth related pattern that emerges regardless of area or season is a rapid drop in catch rates in fishing depths of less than 400 m. The exception, a very restricted area in Hawke Channel (unit areas 202 and 207) yielded catch rates of about 1.1 t per hour at an average depth of 300 m. This portion of the fishery conducted by Poland in 1983 constituted less than 15% of total effort in that year. With it were associated relatively high by-catches of witch and cod which may account for the relatively low effort in this area. For all other areas, particularly in NAFO Div. 2H and 2J, catch rates peaked at depths between 450 and 600 m an almost identical pattern in both years. Catch rates rose rapidly from 350 m and where fishing depths exceeded 600 m rates generally remained relatively stable but somewhat below the maximum. The deepest observed fishery, that of the USSR in 2H, indicated best catch rates between 900 and 1150 m

indicated best catch rates between 900 and 1150 m along the edge of the continental shelf. In the gillnet fishery, gear was set over a very narrow range of depths averaging around 315 m. Here, it is difficult to determine the relationship of catch rates to depth and predict what might occur on the deeper grounds not currently exploited with this gear.

By comparing areas of low by-catch and high catch rates (Fig. 1-4) with the total area fished in 1983-84 (cumulative set positions for all observed Greenland halibut directed fisheries), plots of the best fishing areas were produced. Figures 5 and 6, for each of the years indicated that for otter trawl fisheries, optimum catch rates with low or medium by-catch occurred in units areas 339, 344, 202, 203, 207, 212, 215, and 216 mainly in depths between 450 to 600 m. Although the Canadian fleet fished these locations regularly, their effort was generally spread over a wider area including shallower depths where catch rates were lower and by-catch higher. Therefore, a more appropriate strategy based on the 1983 and 1984 data is to direct for Greenland halibut mainly in June to December in the deep trenches found in the above-mentioned unit areas, particularly 212 and 216. Best catches were and would continue to be sustained at 550 m and effort would best be concentrated in depths greater than 400 m. The southern ground in 339 and 344 while yielding relatively good catches of the directed species, tended to have moderate and some time high by-catches. In the most northern area particularly unit area 212, a catch rate of about 1.5 t per hour, about 40% above average was attained at positions where depths were between 500 and 550 m. Also for these areas, level of by-catch generally remained below 15%.

A comparison of otter trawl catches between Canada and other countries indicated that Canada's catch rates were not very different from the average. In 1983, Canada fished a wide range of latitudes at an average depth of 473 m, about 75 m less than the overall average. This relatively shallow average was due mainly to a substantial spring and summer fishery in unit areas 339 and 344. An associated catch rate of 0.78 t per hour was about 10% below average and by-catch of 27% was 19% higher. However, in 1984 the pattern changed somewhat as the observed Canadian fishery shifted to the deeper more northern areas, with average 529 m. The resulting catch rate increased to 1.07 t per hour, which was slightly above average. Also, corresponding by-catch dropped to 15%. The observed shift in effort location on the part of the Canadian fleet in 1984 toward deeper, more northerly fishing locations resulted in better catches.

Particularly in 1984, Canada attained catch rates that were comparable to or exceeded those of other countries with respect to conventional fishing areas. However, USSR fished considerably deeper in NAFO Div. 2G and 2H away from the more traditional grounds. In a depth range of 900-1150 m in unit areas 219, 216, and 213 USSR sustained relatively good rates of about 1 t per hour. In the southern portion of Subarea 0A catch rates of about 0.7-0.8 t per hour were sustained. Also, when USSR was directing for roundnose grenadier in Div. 2G and 2H, Kulka (1985) indicated that high by-catches of Greenland halibut were common in 600-900 m and often dominated the catches to the north. All of these data suggested fairly extensive Greenland halibut concentrations in deep waters currently not exploited by Canada.

In summary, although Canada's offshore fishery for Greenland halibut in terms of effort location was not greatly different from those of most other countries, catch rates could be improved by restricting effort to depths greater than 400 m (550 m average) and fishing mainly in the deep trenches of unit areas 212, 213, and 216 between July to December. In terms of fishing grounds not currently exploited by Canada, effort could be expanded to the edge of the continental shelf in unit areas 213, 216, and 219 in 900-1150 m where reasonably good catch rates were observed. This adjustment should result in an improved catch per unit effort of about 25% as well as providing for expanded fishing grounds.

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Table 1. Summary of the observed turbot fishery, 1983-84.

Table 1a. Otter trawl, 1983.
Table 1b. Otter trawl, 1984.
Table 1c. Gillnet, 1983.
Table 1d. Gillnet, 1984.

GENERAL NOTES

Footnotes for Table 1a-d

A) All catch data are recorded in metric tonnes.

B) Depth is recorded in metres.

C) Turbot = Greenland halibut

D) Units areas, numerically coded as illustrated in Fig. 1 and 2.

E) Tables c and d listing gillnet data represent fisheries from Canadian quota taken by chartered Portuguese vessels.

ABBREVIATIONS

1) CATCHWT = weight of catch by species (MT).

2) N-SETS = number of sets observed containing the corresponding species. Number of sets listed for the directed species are the total sets observed.

3) AVGDEPTH = average depth fished in metres corresponding to those sets observed to contain the species.

4) C-SET = Catch per set in tonnes regardless of fishing time per set.

5) NHRS = total number of hours of fishing time where each species was observed.

6) C-HR = Catch per unit effort, in this case metric tonnes per hour.

7) TOTNETS = total number of nets used to take the corresponding weight of species (catchwt). Average number of nets used per set can be calculated by dividing tot nets by N-sets.

8) C-NET = catch per unit effort in terms of average catch per net, in metric tonnes.

TA LE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1983, CATCHES AND CATCH RATES RECORDED IN METR[a] TONNE

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JAN NAFO=3K UNITAREA=339

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
1	SKATES	0.475	7	443	0.07	29	0.02
2	COD	0.840	7	443	0.12	29	0.03
3	RNGRENADIER	0.195	7	443	0.03	29	0.01
4	ST WOLFISH	0.055	4	441	0.01	16	0.00
5	SP WOLFISH	0.225	7	443	0.03	29	0.01
6	EELPOUTS	0.025	2	438	0.01	9	0.00
7	PLAICE	1.875	7	443	0.27	29	0.06
8	WITCH	0.225	7	443	0.03	29	0.01
9	TURBOT	23.150	7	443	3.31	29	0.80
UNITAREA		27.065					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JAN NAFO=3K UNITAREA=346

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
10	SKATES	0.075	1	446	0.07	5	0.01
11	COD	0.125	1	446	0.13	5	0.02
12	RNGRENADIER	0.025	1	446	0.02	5	0.00
13	SP WOLFISH	0.040	1	446	0.04	5	0.01
14	EELPOUTS	0.010	1	446	0.01	5	0.00
15	PLAICE	0.500	1	446	0.50	5	0.10
16	WITCH	0.020	1	446	0.02	5	0.00
17	TURBOT	2.050	1	446	2.05	5	0.41
UNITAREA		2.845					
NAFO		29.910					
MONTH		29.910					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=MAY NAFO=3K UNITAREA=339

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
18	SKATES	2.525	50	460	0.05	142.5	0.02
19	CAPELIN	0.003	2	491	0.00	6.0	0.00
20	COD	22.890	51	460	0.45	145.5	0.16
21	R H GREN	0.135	15	440	0.01	41.3	0.00
22	RNGRENADIER	0.580	12	468	0.05	37.0	0.02
23	N WOLFISH	0.080	7	484	0.01	20.0	0.00
24	SP WOLFISH	0.475	19	471	0.02	54.8	0.01
25	EELPOUTS	0.258	36	469	0.01	105.6	0.00
26	REDFISHUNSP	2.800	24	447	0.12	64.5	0.04
27	PLAICE	5.590	49	463	0.11	141.7	0.04
28	WITCH	29.035	51	460	0.57	145.5	0.20
29	TURBOT	138.410	51	460	2.71	145.5	0.95
30	HALIBUT	0.210	11	477	0.02	32.1	0.01
31	SHRIMPNS	0.001	1	466	0.00	3.0	0.00
32	BOREALIS SHRIMP	0.049	9	424	0.01	23.6	0.00
33	SNOW CRAB	0.017	11	474	0.00	32.3	0.00
34	CARCCHARNS	0.002	1	475	0.00	3.0	0.00
UNITAREA		203.060					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1983, CATCHES AND CATCH RATES RECORDED IN METRI TONNES

a

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=MAY NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
35	SKATES	0.550	12	363	0.05	28.7	0.02
36	COD	7.750	12	363	0.65	28.7	0.27
37	R H GREN	0.075	10	356	0.01	24.1	0.00
38	RNGRENADIER	0.020	1	475	0.02	3.0	0.01
39	N WOLFISH	0.010	1	486	0.01	3.0	0.00
40	ST WOLFISH	0.035	4	320	0.01	8.2	0.00
41	SP WOLFISH	0.220	6	376	0.04	15.0	0.01
42	EELPOUTS	0.100	12	363	0.01	28.7	0.00
43	REDFISHUNSP	8.170	10	339	0.82	22.7	0.36
44	PLAICE	1.310	12	363	0.11	28.7	0.05
45	ITCH	11.620	12	363	0.97	28.7	0.40
46	TURBOT	18.300	12	363	1.52	28.7	0.64
47	HALIBUT	0.090	4	320	0.02	9.1	0.01
48	BOREALIS SHRIMP	0.035	5	325	0.01	9.9	0.00
49	SNOW CRAB	0.007	2	490	0.00	6.0	0.00
UNITAREA		48.292					
NAFO		251.352					
MONTH		251.352					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JUNE NAFO=2J UNITAREA=203

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
50	TH SKATE	0.210	4	326	0.05	7.5	0.03
51	COD	31.775	4	326	7.94	7.5	4.24
52	RNGRENADIER	0.180	4	326	0.04	7.5	0.02
53	SP WOLFISH	0.200	4	326	0.05	7.5	0.03
54	MENTELLA	0.055	3	355	0.02	5.0	0.01
55	PLAICE	0.360	5	337	0.07	8.5	0.04
56	WITCH	0.300	4	326	0.07	7.5	0.04
57	TURBOT	1.220	3	308	0.41	6.5	0.19
58	HALIBUT	0.005	1	241	0.00	2.5	0.00
UNITAREA		34.305					
NAFO		34.305					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JUNE NAFO=3K UNITAREA=339

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
59	SKATES	0.470	8	443	0.06	24	0.02
60	COD	4.350	8	443	0.54	24	0.18
61	N WOLFISH	0.020	1	440	0.02	3	0.01
62	SP WOLFISH	0.280	7	438	0.04	21	0.01
63	EELPOUTS	0.045	5	467	0.01	15	0.00
64	REDFISHUNSP	0.040	2	475	0.02	6	0.01
65	PLAICE	0.235	8	443	0.03	24	0.01
66	WITCH	7.300	8	443	0.91	24	0.30
67	TURBOT	9.200	8	443	1.15	24	0.38
UNITAREA		21.940					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES
a

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JUNE NAFO=3K UNITAREA=343

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
68	GL SHARK	1.400	3	496	0.47	9.8	0.14
69	SKATES	2.965	37	475	0.08	132.2	0.02
70	TH SKATE	2.010	25	433	0.08	94.0	0.02
71	COD	37.660	63	456	0.60	228.7	0.16
72	R H GREN	0.075	9	452	0.01	42.8	0.00
73	RNGRENADIER	0.422	26	436	0.02	97.0	0.00
74	N WOLFISH	0.745	29	480	0.03	94.9	0.01
75	SP WOLFISH	1.277	36	435	0.04	144.3	0.01
76	EELPOUTS	0.116	10	439	0.01	41.8	0.00
77	REDFISHUNSP	1.010	30	475	0.03	96.9	0.01
78	PLAICE	1.550	61	457	0.03	225.2	0.01
79	WITCH	13.665	35	434	0.39	139.3	0.10
80	TURBOT	173.155	63	456	2.75	228.7	0.76
81	HALIBUT	0.037	6	423	0.01	20.5	0.00
UNITAREA		236.087					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JUNE NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
82	SKATES	0.230	4	459	0.06	12	0.02
83	COD	3.200	4	459	0.80	12	0.27
84	SP WOLFISH	0.070	3	450	0.02	9	0.01
85	EELPOUTS	0.035	4	459	0.01	12	0.00
86	PLAICE	0.105	4	459	0.03	12	0.01
87	WITCH	2.900	4	459	0.72	12	0.24
88	TURBOT	4.300	4	459	1.07	12	0.36
UNITAREA		10.840					
NAFO		268.867					
MONTH		303.172					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=2H UNITAREA=212

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
89	SKATES	3.330	16	515	0.21	63.7	0.05
90	COD	3.085	14	513	0.22	54.2	0.06
91	R H GREN	0.010	1	400	0.01	5.0	0.00
92	N WOLFISH	1.240	12	502	0.10	48.6	0.03
93	SP WOLFISH	1.105	6	442	0.18	24.5	0.05
94	EELPOUTS	0.095	9	514	0.01	37.5	0.00
95	REDFISHUNSP	0.070	3	507	0.02	13.7	0.01
96	PLAICE	2.015	14	523	0.14	55.4	0.04
97	TURBOT	62.150	16	515	3.88	63.7	0.98
98	HALIBUT	0.115	8	539	0.01	33.8	0.00
99	BOREALIS SHRIMP	0.100	10	561	0.01	38.4	0.00
UNITAREA		73.315					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1983. CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=2H UNITAREA=215

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
100	SKATES	1.280	7	476	0.18	24.5	0.05
101	COD	0.280	5	442	0.06	18.0	0.02
102	N WOLFISH	0.440	5	454	0.09	18.0	0.02
103	SP WOLFISH	0.850	2	273	0.42	5.0	0.17
104	EELPOUTS	0.060	5	454	0.01	18.0	0.00
105	PLAICE	2.260	7	476	0.32	24.5	0.09
106	TURBOT	27.820	7	476	3.97	24.5	1.14
107	HALIBUT	0.010	1	529	0.01	5.0	0.00
108	BOREALIS SHRIMP	0.045	4	555	0.01	15.5	0.00
UNITAREA		33.045					
NAFO		106.360					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=2J UNITAREA=203

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
109	SKATES	0.43	11	382	0.04	32.7	0.01
110	COD	2.54	17	413	0.15	55.7	0.05
111	RNGRENADIER	1.36	11	471	0.12	40.2	0.03
112	N WOLFISH	3.55	17	413	0.21	55.7	0.06
113	SP WOLFISH	1.32	12	407	0.11	37.7	0.04
114	REDFISHUNSP	1.58	14	414	0.11	45.7	0.03
115	PLAICE	0.38	16	421	0.02	54.7	0.01
116	WITCH	0.72	15	417	0.05	50.7	0.01
117	TURBOT	21.39	18	417	1.19	59.7	0.36
UNITAREA		33.27					
NAFO		33.27					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=3K UNITAREA=343

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
118	SKATES	4.680	30	444	0.16	108.9	0.04
119	TH SKATE	0.210	1	440	0.21	2.7	0.08
120	COD	11.781	30	444	0.39	108.9	0.11
121	R H GREN	0.268	20	441	0.01	71.0	0.00
122	RNGRENADIER	0.060	8	456	0.01	31.1	0.00
123	N WOLFISH	0.090	8	456	0.01	31.1	0.00
124	SP WOLFISH	1.829	29	445	0.06	105.4	0.02
125	EELPOUTS	0.171	23	444	0.01	85.6	0.00
126	REDFISHUNSP	1.441	20	442	0.07	67.9	0.02
127	PLAICE	1.573	29	445	0.06	105.4	0.01
128	WITCH	1.261	30	444	0.04	108.9	0.01
129	TURBOT	49.590	31	444	1.60	111.6	0.44
130	HALIBUT	0.045	5	434	0.01	19.9	0.00
131	BOREALIS SHRIMP	0.012	12	430	0.00	32.9	0.00
UNITAREA		73.011					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

a

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
132	SKATES	0.325	7	449	0.05	23.3	0.01
133	COD	4.636	7	449	0.66	23.3	0.20
134	R H GREN	0.155	7	449	0.02	23.3	0.01
135	SP WOLFISH	0.115	7	449	0.02	23.3	0.00
136	EELPOUTS	0.017	7	449	0.00	23.3	0.00
137	REDFISHUNSP	0.099	3	451	0.03	9.3	0.01
138	PLAICE	0.310	7	449	0.04	23.3	0.01
139	WITCH	0.226	7	449	0.03	23.3	0.01
140	TURBOT	10.058	7	449	1.44	23.3	0.43
141	HALIBUT	0.025	2	443	0.01	7.3	0.00
142	BOREALIS SHRIMP	0.007	7	449	0.00	23.3	0.00
UNITAREA		15.973					
NAFO		88.984					
MONTH		228.614					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2H UNITAREA=?12

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
143	SKATES	0.250	7	597	0.04	30.6	0.01
144	COD	0.552	6	596	0.09	26.6	0.02
145	REDHAKE	0.008	5	589	0.00	22.5	0.00
146	RNGRENADIER	0.003	3	603	0.03	13.1	0.00
147	N WOLFISH	1.050	7	597	0.15	30.6	0.03
148	EELPOUTS	0.006	6	592	0.00	25.6	0.00
149	SCULPINHOOK	0.001	1	600	0.00	5.0	0.00
150	PLAICE	0.033	3	602	0.01	12.6	0.00
151	WITCH	0.005	3	590	0.00	12.5	0.00
152	TURBOT	31.978	7	597	4.57	30.6	1.05
153	HALIBUT	0.040	1	574	0.04	5.0	0.01
154	BOREALIS SHRIMP	0.005	5	591	0.00	20.6	0.00
155	NEOLITHODES	0.008	7	597	0.00	30.6	0.00
UNITAREA		33.939					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2H UNITAREA=?15

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
156	SKATES	0.145	4	586	0.04	14.7	0.01
157	COD	0.170	4	586	0.04	14.7	0.01
158	REDHAKE	0.005	4	586	0.00	14.7	0.00
159	RNGRENADIER	0.001	1	600	0.00	5.0	0.00
160	N WOLFISH	0.370	4	586	0.09	14.7	0.03
161	EELPOUTS	0.004	4	586	0.00	14.7	0.00
162	PLAICE	0.003	2	578	0.00	7.2	0.00
163	WITCH	0.007	2	595	0.00	7.5	0.00
164	TURBOT	19.679	4	586	4.92	14.7	1.34
165	HALIBUT	0.010	1	556	0.01	2.2	0.00
166	BOREALIS SHRIMP	0.004	4	586	0.00	14.7	0.00
167	NEOLITHODES	0.002	2	595	0.00	7.5	0.00

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES
a

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2H UNITAREA=215

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
UNITAREA		20.400					
NAFO		54.339					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2J UNITAREA=210

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
168	SLEEPER SHARKS	1.000	1	560	1.00	4.0	0.25
169	SKATES	2.535	22	520	0.12	74.4	0.03
170	TH SKATE	0.830	30	524	0.03	104.3	0.01
171	SPTAIL SKATE	0.265	14	525	0.02	48.1	0.01
172	COD	40.409	54	522	0.75	184.9	0.22
173	WHITE HAKE	0.001	1	490	0.00	3.5	0.00
174	N WOLFISH	5.545	52	522	0.11	178.7	0.03
175	SP WOLFISH	0.284	27	523	0.01	94.8	0.00
176	REDFISHUNSP	0.084	22	521	0.00	76.6	0.00
177	SCULPINHOOK	0.001	1	545	0.00	3.3	0.00
178	SCULPINPALL	0.001	1	560	0.00	3.8	0.00
179	PLAICE	0.365	42	524	0.01	145.8	0.00
180	WITCH	0.234	35	527	0.01	121.8	0.00
181	TURBOT	246.647	54	522	4.57	184.9	1.33
182	HALIBUT	0.019	2	509	0.01	6.2	0.00
183	MONKFISH	0.004	3	525	0.00	12.0	0.00
184	BOREALIS SHRIMP	0.082	50	522	0.00	173.0	0.00
185	SNOW CRAB	0.035	12	521	0.00	42.4	0.00
UNITAREA		298.341					
NAFO		298.341					
MONTH		352.680					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEP1 NAFO=2H UNITAREA=212

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
186	SKATES	0.325	7	562	0.05	29.5	0.01
187	COD	0.477	8	566	0.06	33.5	0.01
188	REDHAKE	0.007	6	564	0.00	24.5	0.00
189	RNGRENADIER	0.005	5	560	0.00	20.0	0.00
190	N WOLFISH	0.680	7	562	0.10	29.5	0.02
191	EELPOUTS	0.007	7	567	0.00	28.5	0.00
192	REDFISHUNSP	0.002	2	573	0.00	0.0	0.00
193	PLAICE	0.009	5	565	0.00	20.0	0.00
194	WITCH	0.006	5	562	0.00	21.0	0.00
195	TURBOT	34.253	8	566	4.28	33.5	1.02
196	HALIBUT	0.010	1	549	0.01	5.0	0.00
197	OCTOPUSNS	0.001	1	607	0.00	5.0	0.00
198	BOREALIS SHRIMP	0.009	8	566	0.00	33.5	0.00
199	NEOLITHODES	0.009	8	566	0.00	33.5	0.00
UNITAREA		35.800					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2H UNITAREA=215

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
200	SKATES	0.52	6	598	0.09	25.0	0.02
201	COD	0.71	6	598	0.12	25.0	0.03
202	REDHAKE	0.01	6	598	0.00	25.0	0.00
203	RNGRENADIER	0.01	5	604	0.00	21.0	0.00
204	N WOLFISH	0.72	6	598	0.12	25.0	0.03
205	EELPOUTS	0.00	4	586	0.00	16.5	0.00
206	PLAICE	0.05	4	590	0.01	16.5	0.00
207	WITCH	0.01	5	591	0.00	20.0	0.00
208	TURBOT	41.63	6	598	6.94	25.0	1.67
209	HALIBUT	0.01	1	613	0.01	5.0	0.00
210	BOREALIS SHRIMP	0.01	5	604	0.00	21.0	0.00
211	NEOLITHODES	0.01	6	598	0.00	25.0	0.00
UNITAREA		43.70					
NAFO		79.50					
MONTH		79.50					
COUNTRY		1245.23					

DIRECT=TURBOT COUNTRY=GDR MONTH=AUG NAFO=3K UNITAREA=339

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
212	GL SHARK	0.500	1	475	0.50	8.0	0.06
213	BL DOGFISH	0.050	1	480	0.05	7.0	0.01
214	SKATENS9	0.600	1	470	0.60	4.0	0.15
215	SKATES	12.585	48	472	0.26	304.1	0.04
216	TH SKATE	9.870	48	475	0.21	286.0	0.03
217	BNDOORSKATE	3.589	46	475	0.08	273.5	0.01
218	CAPELIN	0.007	2	490	0.00	12.5	0.00
219	COD	3.743	81	473	0.05	489.5	0.01
220	R H GREY	3.353	61	475	0.05	369.8	0.01
221	RNGRENADIER	1.845	31	473	0.06	191.9	0.01
222	N WOLFISH	3.910	93	474	0.04	567.3	0.01
223	SP WOLFISH	1.338	56	473	0.02	346.3	0.00
224	EELPOUTS	3.540	45	471	0.08	283.4	0.01
225	VAHLS EELPOUT	3.785	47	475	0.08	279.7	0.01
226	REDFISHUNSP	0.743	69	474	0.01	417.6	0.00
227	LUMPFISHNS	0.010	1	485	0.01	5.9	0.00
228	PLAICE	4.810	83	475	0.06	498.9	0.01
229	WITCH	24.196	95	474	0.25	582.1	0.04
230	TURBOT	188.929	98	474	1.93	600.6	0.31
231	HALIBUT	0.010	1	490	0.01	6.0	0.00
232	BOREALIS SHRIMP	0.075	15	467	0.00	93.6	0.00
UNITAREA		267.488					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=GDR MONTH=AUG NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
233	GL SHARK	0.250	1	470	0.25	6.3	0.04
234	BL DOGFISH	0.550	2	470	0.27	13.0	0.04
235	SKATES	11.183	42	482	0.27	249.2	0.04
236	TH SKATE	8.994	49	487	0.18	289.4	0.03
237	BNDOORSKATE	3.248	49	487	0.07	289.4	0.01
238	CAPELIN	0.019	5	472	0.00	27.0	0.00
239	TAPIRFISH	0.005	1	470	0.00	6.3	0.00
240	BLUE HAKE	0.003	1	470	0.00	6.3	0.00
241	COD	3.000	77	487	0.04	447.8	0.01
242	TB ROCKLING	0.001	1	480	0.00	6.3	0.00
243	R H GREN	3.428	61	490	0.06	354.2	0.01
244	RNGRENADIER	1.995	27	473	0.07	166.2	0.01
245	N WOLFISH	3.911	88	485	0.04	520.8	0.01
246	SP WOLFISH	0.940	49	490	0.02	281.0	0.00
247	EELPOUTS	3.175	38	482	0.08	228.3	0.01
248	VAHLS EELPOUT	3.191	47	487	0.07	277.4	0.01
249	REDFISHUNSP	1.916	71	487	0.03	411.3	0.00
250	LUMPFISHNS	0.005	1	475	0.00	6.0	0.00
251	PLAICE	4.124	80	486	0.05	463.5	0.01
252	ITCH	21.017	90	485	0.23	533.3	0.04
253	TURBOT	164.577	91	485	1.81	538.6	0.31
254	HALIBUT	0.010	1	500	0.01	6.5	0.00
255	BOREALIS SHRIMP	0.118	18	474	0.01	107.2	0.00
256	MONTAGUE SHRIMP	0.045	3	470	0.01	23.9	0.00
UNITAREA		235.705					

DIRECT=TURBOT COUNTRY=GDR MONTH=AUG NAFO=3K UNITAREA=345

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
257	SKATES	0.550	2	443	0.27	10.4	0.05
258	COD	0.110	2	443	0.05	10.4	0.01
259	R H GREN	0.050	1	465	0.05	6.9	0.01
260	RNGRENADIER	0.100	1	420	0.10	3.5	0.03
261	N WOLFISH	0.080	2	443	0.04	10.4	0.01
262	SP WOLFISH	0.015	2	443	0.01	10.4	0.00
263	EELPOUTS	0.175	2	443	0.09	10.4	0.02
264	REDFISHUNSP	0.030	2	443	0.01	10.4	0.00
265	PLAICE	0.150	2	443	0.07	10.4	0.01
266	WITCH	0.500	2	443	0.25	10.4	0.05
267	TURBOT	5.100	2	443	2.55	10.4	0.49
UNITAREA		6.860					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

a

DIRECT=TURBOT COUNTRY=GDR MONTH=AUG NAFO=3K UNITAREA=347

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
268	GL SHARK	0.650	2	550	0.32	7.0	0.09
269	BL DOGFISH	2.100	3	507	0.70	10.0	0.21
270	SKATES	0.550	2	635	0.27	6.3	0.09
271	TH SKATE	0.240	3	653	0.08	10.8	0.02
272	BNDOORSKATE	0.105	3	653	0.03	10.8	0.01
273	BLACKHERRING	0.005	1	420	0.00	3.0	0.00
274	TAPIRFISH	0.006	2	450	0.00	6.0	0.00
275	BLUE HAKE	0.032	3	507	0.01	10.0	0.00
276	COD	0.113	4	595	0.03	13.8	0.01
277	R H GREN	0.325	4	585	0.08	13.8	0.02
278	RNGRENADIER	0.310	4	688	0.08	14.1	0.02
279	N WOLFISH	0.525	4	595	0.13	13.8	0.04
280	ST WOLFISH	0.005	1	420	0.00	3.0	0.00
281	SP WOLFISH	0.070	4	595	0.02	13.8	0.01
282	FELPOUTS	0.075	1	420	0.07	3.0	0.02
283	VAHLS EELPOUT	0.090	3	653	0.03	10.8	0.01
284	REDFISHUNSP	2.100	4	595	0.52	13.8	0.15
285	SCULPINARCT	0.010	1	620	0.01	4.0	0.00
286	PLAICE	0.180	4	595	0.04	13.8	0.01
287	WITCH	0.530	3	583	0.18	9.3	0.06
288	TURBOT	8.400	5	646	1.68	17.1	0.49
UNITAREA		16.421					
NAFO		526.474					
MONTH		526.474					
COUNTRY		526.474					

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DIRECT=TURBOT COUNTRY=POLAND MONTH=JAN NAFO=2J UNITAREA=203

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
289	COD	4.250	3	697	1.42	8.5	0.50
290	N WOLFISH	0.015	1	660	0.01	3.0	0.00
291	SP WOLFISH	0.170	2	745	0.08	6.0	0.03
292	REDFISHUNSP	0.060	1	600	0.06	2.5	0.02
293	PLAICE	0.050	1	830	0.05	3.0	0.02
294	WITCH	0.015	1	600	0.01	2.5	0.01
295	TURBOT	0.110	3	697	0.04	8.5	0.01
296	HALIBUT	0.025	1	660	0.02	3.0	0.01
UNITAREA		4.695					
NAFO		4.695					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=POLAND MONTH=JAN NAFO=3K UNITAREA=330

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
297	GL SHARK	1.500	1	480	1.50	6.0	0.25
298	SKATES	4.455	28	494	0.16	149.6	0.03
299	COD	7.510	27	494	0.28	143.1	0.05
300	RNGRENADIER	0.740	11	491	0.07	62.4	0.01
301	N WOLFISH	1.920	15	493	0.13	88.7	0.02
302	ST WOLFISH	0.020	1	480	0.02	5.5	0.00
303	SP WOLFISH	0.250	6	489	0.04	36.7	0.01
304	EELPOUTS	0.001	1	490	0.00	5.5	0.00
305	REDFISHUNSP	0.003	3	488	0.00	16.3	0.00
306	PLAICE	17.585	30	494	0.59	159.4	0.11
307	WITCH	6.032	17	497	0.35	92.9	0.06
308	TURBOT	124.311	30	494	4.14	159.4	0.78
309	HALIBUT	0.010	1	490	0.01	5.5	0.00
310	BOREALIS SHRIMP	0.001	1	480	0.00	5.7	0.00
311	CANCER SP	0.010	10	493	0.00	55.8	0.00
UNITAREA		164.348					

DIRECT=TURBOT COUNTRY=POLAND MONTH=JAN NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
312	SKATES	0.660	8	504	0.08	41.8	0.02
313	SPTAIL SKATE	0.100	1	500	0.10	4.2	0.02
314	COD	2.348	9	503	0.26	46.0	0.05
315	RNGRENADIER	0.181	6	503	0.03	30.3	0.01
316	N WOLFISH	0.330	4	504	0.08	23.0	0.01
317	SP WOLFISH	0.030	1	500	0.03	5.5	0.01
318	EELPOUTS	0.001	1	500	0.00	5.5	0.00
319	REDFISHUNSP	0.100	1	480	0.10	2.0	0.05
320	SPLUMPFISH	0.010	1	500	0.01	4.2	0.00
321	PLAICE	2.070	9	503	0.23	46.0	0.04
322	WITCH	1.000	8	504	0.12	41.8	0.02
323	TURBOT	22.715	9	503	2.52	46.0	0.49
UNITAREA		29.545					

DIRECT=TURBOT COUNTRY=POLAND MONTH=JAN NAFO=3K UNITAREA=345

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
324	SKATES	0.010	1	420	0.01	4	0.00
325	COD	0.400	1	420	0.40	4	0.10
326	PLAICE	0.850	1	420	0.85	4	0.21
327	TURBOT	2.000	1	420	2.00	4	0.50
328	CANCER SP	0.001	1	420	0.00	4	0.00
UNITAREA		3.261					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

a

DIRECT=TURBOT COUNTRY=POLAND MONTH=JAN NAFO=3K UNITAREA=346

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
329	BL DOGFISH	0.030	1	700	0.03	4.0	0.01
330	SKATES	0.200	2	600	0.10	7.7	0.03
331	R H GREN	0.070	2	600	0.03	7.7	0.01
332	RNGRENADIER	0.190	3	633	0.06	9.7	0.02
333	N WOLFISH	0.007	1	700	0.01	2.0	0.00
334	SP WOLFISH	0.200	2	600	0.10	7.7	0.03
335	REDFISHUNSP	4.020	3	633	1.34	9.7	0.41
336	LUMPFISHNF	0.002	1	700	0.00	4.0	0.00
337	WITCH	7.500	2	600	3.75	7.7	0.97
338	TURBOT	1.600	4	625	0.40	10.4	0.15
339	HALIBUT	0.040	2	600	0.02	7.7	0.01
UNITAREA		13.859					
NAFO		211.013					
MONTH		215.708					

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=2J UNITAREA=204

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
340	BL DOGFISH	0.050	1	850	0.05	4.7	0.01
341	SKATES	0.320	4	829	0.08	21.9	0.01
342	SPTAIL SKATE	0.415	3	763	0.14	13.0	0.03
343	COD	2.805	4	780	0.70	20.7	0.14
344	R H GREN	0.450	4	829	0.11	21.9	0.02
345	RNGRENADIER	0.450	4	829	0.11	21.9	0.02
346	N WOLFISH	1.010	9	805	0.11	40.2	0.03
347	SP WOLFISH	0.785	8	826	0.10	35.2	0.02
348	REDFISHUNSP	1.045	5	787	0.21	28.0	0.04
349	PLAICE	7.060	9	805	0.78	40.2	0.18
350	WITCH	1.800	6	827	0.30	24.2	0.07
351	TURBOT	41.100	9	805	4.57	40.2	1.02
352	HALIBUT	0.750	4	776	0.19	22.2	0.03
UNITAREA		58.040					

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=2J UNITAREA=204

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
353	GL SHARK	1.000	1	800	1.00	2.9	0.34
354	BL DOGFISH	0.120	3	808	0.04	12.7	0.01
355	SKATES	1.000	3	808	0.33	12.7	0.08
356	SPTAIL SKATE	0.870	4	741	0.22	12.0	0.07
357	BLACKHERRING	0.003	2	813	0.00	8.4	0.00
358	BLUE HAKE	0.004	2	813	0.00	8.4	0.00
359	COD	1.225	4	793	0.31	17.8	0.07
360	R H GREN	1.250	3	808	0.42	12.7	0.10
361	RNGRENADIER	1.485	6	741	0.25	21.0	0.07
362	N WOLFISH	3.570	6	765	0.59	22.9	0.16
363	SP WOLFISH	1.285	8	754	0.16	30.3	0.04
364	EELPOUTS	0.003	2	813	0.00	8.4	0.00

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

a

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=2J UNITAREA=20A

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
365	REDFISHUNSP	1.050	5	729	0.21	19.2	0.05
366	PLAICE	4.415	9	763	0.49	35.3	0.13
367	WITCH	5.090	8	766	0.64	30.2	0.17
368	TURBOT	28.970	10	767	2.90	37.1	0.78
369	HALIBUT	0.280	4	743	0.07	17.6	0.02
UNITAREA		51.620					

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=2J UNITAREA=20A

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
370	GL SHARK	3.500	2	785	1.75	12.0	0.29
371	SKATES	0.500	3	777	0.17	18.7	0.03
372	SPTAIL SKATE	0.710	7	829	0.10	26.8	0.03
373	BLUE HAKE	0.002	1	750	0.00	7.0	0.00
374	COD	5.775	5	761	1.15	27.5	0.21
375	R H GREN	0.350	3	777	0.12	18.7	0.02
376	RNGRENADIER	0.560	7	792	0.08	33.9	0.02
377	N WOLFISH	0.860	8	803	0.11	38.3	0.02
378	SP WOLFISH	0.735	8	809	0.09	39.5	0.02
379	REDFISHUNSP	0.735	9	799	0.08	43.0	0.02
380	PLAICE	10.750	14	810	0.77	62.7	0.17
381	WITCH	2.175	9	797	0.24	44.2	0.05
382	TURBOT	54.700	14	810	3.91	62.7	0.87
383	HALIBUT	0.400	7	803	0.06	35.4	0.01
384	BOREALIS SHRIMP	0.001	1	750	0.00	7.0	0.00
UNITAREA		81.753					
NAFO		191.413					

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=3K UNITAREA=3Ka

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
385	SKATES	0.440	7	496	0.06	35.6	0.01
386	SPTAIL SKATE	0.100	3	478	0.03	15.6	0.01
387	BLUE HAKE	0.011	4	496	0.00	20.5	0.00
388	COD	1.005	11	488	0.09	55.5	0.02
389	R H GREN	0.150	6	496	0.02	32.7	0.00
390	RNGRENADIER	0.170	6	496	0.03	32.7	0.01
391	N WOLFISH	0.215	6	487	0.04	30.3	0.01
392	SP WOLFISH	0.320	7	494	0.05	35.7	0.01
393	EELPOUTS	0.012	3	495	0.00	13.5	0.00
394	COMMONPOUT	0.035	3	485	0.01	15.3	0.00
395	REDFISHUNSP	0.050	1	500	0.05	7.0	0.01
396	PLAICE	7.600	11	488	0.69	55.5	0.14
397	WITCH	0.320	4	498	0.08	22.6	0.01
398	TURBOT	56.600	11	488	5.15	55.5	1.02
399	HALIBUT	0.080	3	500	0.03	14.9	0.01
400	BOREALIS SHRIMP	0.003	2	500	0.00	7.9	0.00
401	SNOW CRAB	0.001	1	500	0.00	7.0	0.00

TABLE 1a-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1983. CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=3K UNITAREA=339

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
UNITAREA		67.112					

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
402	SPTAIL SKATE	0.120	1	500	0.12	4.5	0.03
403	COD	0.070	1	500	0.07	4.5	0.02
404	N WOLFISH	0.060	1	500	0.06	4.5	0.01
405	SP WOLFISH	0.025	1	500	0.02	4.5	0.01
406	PLAICE	0.300	1	500	0.30	4.5	0.07
407	TURBOT	3.200	1	500	3.20	4.5	0.71
UNITAREA		3.775					

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=3K UNITAREA=346

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
408	GL SHARK	4.000	3	670	1.33	8.5	0.47
409	BL DOGFISH	0.820	9	663	0.09	27.6	0.03
410	SKATES	0.880	9	678	0.10	27.4	0.03
411	SPTAIL SKATE	0.325	4	598	0.08	12.5	0.03
412	BLACKHERRING	0.001	1	600	0.00	2.2	0.00
413	BLUE HAKE	0.003	2	640	0.00	7.3	0.00
414	COD	3.300	4	578	0.82	13.9	0.24
415	R H GREY	4.211	10	665	0.42	30.4	0.14
416	RNGRENADIER	10.010	16	657	0.63	50.0	0.20
417	N WOLFISH	0.920	10	657	0.09	29.6	0.03
418	SP WOLFISH	1.090	9	683	0.12	25.8	0.04
419	EELPOUTS	0.010	1	730	0.01	4.3	0.00
420	COMMONPOUT	0.008	2	575	0.00	6.1	0.00
421	REDFISHUNSP	9.820	12	658	0.82	33.5	0.29
422	PLAICE	4.850	10	663	0.48	31.6	0.15
423	WITCH	35.900	16	650	2.24	50.4	0.71
424	TURBOT	12.272	20	644	0.61	63.8	0.19
425	HALIBUT	0.620	6	653	0.10	18.9	0.03
426	BOREALIS SHRIMP	0.001	1	680	0.00	2.0	0.00
UNITAREA		89.041					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=3K UNITAREA=347

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
427	GL SHARK	1.000	2	730	0.50	8.0	0.12
428	BL DOGFISH	0.200	4	680	0.05	11.0	0.02
429	SKATES	0.120	3	670	0.04	9.5	0.01
430	SPTAIL SKATE	0.325	2	770	0.16	5.4	0.06
431	R H GREN	0.275	3	667	0.09	11.3	0.02
432	RNGRENADIER	1.300	6	648	0.22	14.8	0.09
433	N WOLFISH	0.425	6	708	0.07	18.2	0.02
434	SP WOLFISH	0.200	2	690	0.10	7.3	0.03
435	REDFISHUNSP	6.550	7	696	0.94	22.2	0.30
436	PLAICE	3.560	6	708	0.59	18.2	0.20
437	WITCH	11.000	6	693	1.83	20.7	0.53
438	TURBOT	10.315	9	663	1.15	26.8	0.38
439	HALIBUT	0.205	3	687	0.07	9.0	0.02
UNITAREA		35.475					
NAFO		195.403					
MONTH		386.816					

DIRECT=TURBOT COUNTRY=POLAND MONTH=MAY NAFO=3K UNITAREA=339

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
440	GL SHARK	2.000	2	450	1.00	10.5	0.19
441	SKATES	1.890	28	474	0.07	141.4	0.01
442	TH SKATE	2.695	53	466	0.06	271.7	0.01
443	BNDOORSKATE	0.005	1	450	0.00	5.0	0.00
444	CAPELIN	0.002	2	465	0.00	10.6	0.00
445	COD	41.939	80	469	0.52	409.1	0.10
446	R H GREY	0.310	28	469	0.01	145.7	0.00
447	N WOLFISH	0.060	3	460	0.02	15.7	0.00
448	SP WOLFISH	0.660	18	470	0.04	95.9	0.01
449	EELPOUTS	0.942	71	468	0.01	342.4	0.00
450	REDFISHUNSP	1.089	67	467	0.02	344.4	0.00
451	SCULPIN DEEP	0.001	1	473	0.00	5.0	0.00
452	LUMPFISH	0.002	1	450	0.00	5.3	0.00
453	PLAICE	10.595	80	469	0.13	408.1	0.03
454	WITCH	34.574	81	469	0.43	413.1	0.08
455	TURBOT	427.298	81	469	5.28	413.1	1.03
456	HALIBUT	0.075	8	462	0.01	41.0	0.00
457	BOREALIS SHRIMP	0.082	81	469	0.00	413.1	0.00
458	SNOW CRAB	0.038	36	472	0.00	181.8	0.00
UNITAREA		524.567					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=POLAND MONTH=MAY NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
459	TH SKATE	0.070	2	468	0.03	12	0.01
460	CAPELIN	0.001	1	460	0.00	6	0.00
461	COD	0.030	1	475	0.03	6	0.00
462	R H GREN	0.020	1	475	0.02	6	0.00
463	EELPOUTS	0.010	1	460	0.01	6	0.00
464	REDFISHUNSP	0.025	2	468	0.01	12	0.00
465	PLAICE	0.350	2	468	0.17	12	0.03
466	WITCH	1.000	2	468	0.50	12	0.08
467	TURBOT	16.000	2	468	8.00	12	1.33
468	BOREALIS SHRIMP	0.002	2	468	0.00	12	0.00
UNITAREA		17.508					
NAFO		542.065					
MONTH		542.065					

DIRECT=TURBOT COUNTRY=POLAND MONTH=JUNE NAFO=3K UNITAREA=339

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
469	SKATES	3.810	72	486	0.05	416.6	0.01
470	TH SKATE	0.905	23	479	0.04	112.7	0.01
471	TAPIRFISH	0.005	1	480	0.00	6.0	0.00
472	COD	42.185	96	484	0.44	535.3	0.08
473	R H GREN	0.650	34	485	0.02	186.7	0.00
474	COM GREN	0.090	12	473	0.01	75.7	0.00
475	N WOLFISH	0.380	15	485	0.03	97.6	0.00
476	ST WOLFISH	0.115	6	507	0.02	36.7	0.00
477	SP WOLFISH	1.305	46	485	0.03	270.7	0.00
478	WRYMOUNTH	0.009	3	486	0.00	13.5	0.00
479	EELPOUTS	1.041	74	480	0.01	405.8	0.00
480	REDFISHUNSP	0.568	56	479	0.01	303.7	0.00
481	PLAICE	10.215	95	484	0.11	530.3	0.02
482	WITCH	57.859	96	484	0.60	535.3	0.11
483	TURBOT	369.360	96	484	3.85	535.3	0.69
484	HALIBUT	0.200	17	481	0.01	92.2	0.00
485	BOREALIS SHRIMP	0.057	52	479	0.00	260.0	0.00
486	CANCER SP	0.012	4	474	0.00	24.8	0.00
487	SNOW CRAB	0.029	29	478	0.00	146.9	0.00
UNITAREA		488.795					

DIRECT=TURBOT COUNTRY=POLAND MONTH=JUNE NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
488	GL SHARK	1.000	1	460	1.00	6.5	0.15
489	SKATES	1.735	22	467	0.08	132.5	0.01
490	TH SKATE	0.675	19	472	0.04	99.1	0.01
491	COD	18.860	40	469	0.47	226.5	0.08
492	R H GREN	0.370	21	465	0.02	115.6	0.00
493	COM GREN.	0.060	8	468	0.01	51.2	0.00
494	N WOLFISH	0.165	8	481	0.02	49.5	0.00

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES[a]

DIRECT=TURBOT COUNTRY=POLAND MONTH=JUNE NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
495	SP WOLFISH	0.255	10	464	0.03	62.4	0.00
496	WRYMOUNTH	0.002	1	450	0.00	6.0	0.00
497	EELPOUTS	0.629	32	473	0.02	180.6	0.00
498	REDFISHUNSP	0.505	29	462	0.02	158.3	0.00
499	SCULPIN DEEP	0.001	1	452	0.00	6.1	0.00
500	PLAICE	4.783	41	469	0.12	231.6	0.02
501	WITCH	28.295	41	469	0.69	231.6	0.12
502	TURBOT	172.297	41	469	4.20	231.6	0.74
503	HALIBUT	0.065	6	476	0.01	35.4	0.00
504	BOREALIS SHRIMP	0.022	22	470	0.00	115.7	0.00
505	SNOW CRAB	0.013	10	474	0.00	55.9	0.00
UNITAREA		229.732					
NAFO		718.527					
MONTH		718.527					

DIRECT=TURBOT COUNTRY=POLAND MONTH=JULY NAFO=2H UNITAREA=212

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
506	TH SKATE	0.245	7	546	0.03	30.5	0.01
507	BNDOORSKATE	0.315	7	544	0.04	30.0	0.01
508	COD	3.310	7	546	0.47	30.5	0.11
509	TB ROCKLING	0.001	1	550	0.00	4.0	0.00
510	R H GREY	0.152	8	546	0.02	34.5	0.00
511	N WOLFISH	0.375	8	546	0.05	34.5	0.01
512	ST WOLFISH	0.002	1	550	0.00	4.0	0.00
513	EELPOUTS	0.054	8	546	0.01	34.5	0.00
514	MARINUS	0.005	1	550	0.00	4.0	0.00
515	MENTELLA	0.010	4	555	0.00	17.0	0.00
516	SCULPINS	0.007	5	538	0.00	21.0	0.00
517	FOURHORNSCULP	0.006	4	525	0.00	18.0	0.00
518	PLAICE	0.359	8	548	0.04	34.5	0.01
519	TURBOT	55.723	8	546	6.97	34.5	1.62
520	HALIBUT	0.095	8	546	0.01	34.5	0.00
521	OCTOPUSNS	0.007	7	543	0.00	30.0	0.00
522	SHRIMPNS	0.002	1	550	0.00	4.5	0.00
523	BOREALIS SHRIMP	0.016	8	546	0.00	34.5	0.00
524	MONTAGUE SHRIMP	0.002	2	540	0.00	8.5	0.00
525	CANCER SP	0.001	1	560	0.00	4.0	0.00
UNITAREA		60.687					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES
a

DIRECT=TURBOT COUNTRY=POLAND MONTH=JULY NAFO=2H UNITAREA=213

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
526	GL SHARK	1.000	1	550	1.00	3.5	0.29
527	BL DOGFISH	0.132	8	567	0.02	29.4	0.00
528	BASK SHARK	3.500	2	553	1.75	7.6	0.46
529	SKATES	0.002	1	620	0.00	4.0	0.00
530	TH SKATE	0.010	1	530	0.01	2.2	0.00
531	BNDOORSKATE	0.046	7	568	0.01	26.4	0.00
532	DAGGERTOOTH	0.003	3	540	0.00	11.9	0.00
533	SCOPELOSAURUS	0.005	5	560	0.00	17.1	0.00
534	R H GREY	0.610	22	546	0.03	77.1	0.01
535	N WOLFISH	0.319	25	548	0.01	91.3	0.00
536	SP WOLFISH	0.022	4	543	0.01	15.3	0.00
537	REDFISHUNSP	0.940	9	546	0.10	35.0	0.03
538	MARINUS	0.750	14	535	0.05	48.7	0.02
539	MENTELLA	5.344	16	542	0.33	55.3	0.10
540	SCULPINS	0.002	2	545	0.00	7.3	0.00
541	TURBOT	114.605	26	547	4.41	94.3	1.22
542	HALIBUT	0.589	15	546	0.04	51.2	0.01
543	OCTOPUSNS	0.024	21	548	0.00	77.7	0.00
544	SHRIMPNS	0.001	1	555	0.00	4.9	0.00
545	BOREALIS SHRIMP	0.004	4	554	0.00	14.7	0.00
546	CANCER SP	0.006	5	546	0.00	20.3	0.00
UNITAREA		127.914					

DIRECT=TURBOT COUNTRY=POLAND MONTH=JULY NAFO=2H UNITAREA=215

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
547	TH SKATE	0.075	3	593	0.02	13.5	0.01
548	BNDOORSKATE	0.030	1	630	0.03	4.5	0.01
549	COD	1.450	3	593	0.48	13.5	0.11
550	R H GREY	0.045	3	593	0.01	13.5	0.00
551	N WOLFISH	0.145	3	593	0.05	13.5	0.01
552	SP WOLFISH	0.005	1	560	0.00	4.5	0.00
553	EELPOUTS	0.012	3	593	0.00	13.5	0.00
554	SCULPINS	0.003	2	595	0.00	9.0	0.00
555	PLAICE	0.131	3	593	0.04	13.5	0.01
556	TURBOT	20.616	3	593	6.87	13.5	1.53
557	HALIBUT	0.020	2	610	0.01	9.0	0.00
558	OCTOPUSNS	0.002	2	575	0.00	9.0	0.00
559	BOREALIS SHRIMP	0.004	3	593	0.00	13.5	0.00
UNITAREA		22.538					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=POLAND MONTH=JULY NAFO=2H UNITAREA=216

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
560	TH SKATE	0.045	1	400	0.04	4.5	0.01
561	COD	0.400	1	400	0.40	4.5	0.09
562	IB ROCKLING	0.001	1	400	0.00	4.5	0.00
563	R H GREN	0.010	1	400	0.01	4.5	0.00
564	N WOLFISH	0.060	1	400	0.06	4.5	0.01
565	EELPOUTS	0.010	1	400	0.01	4.5	0.00
566	FOURHORNSCULP	0.001	1	400	0.00	4.5	0.00
567	PLAICE	0.077	1	400	0.08	4.5	0.02
568	TURBOT	3.464	1	400	3.46	4.5	0.77
569	HALIBUT	0.010	1	400	0.01	4.5	0.00
570	OCTOPUSNS	0.001	1	400	0.00	4.5	0.00
571	BOREALIS SHRIMP	0.002	1	400	0.00	4.5	0.00
UNITAREA		4.081					
NAFO		215.220					

DIRECT=TURBOT COUNTRY=POLAND MONTH=JULY NAFO=3K UNITAREA=339

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
572	SKATES	8.235	41	478	0.20	245.2	0.03
573	TH SKATE	19.570	78	462	0.25	341.7	0.06
574	COD	40.325	118	467	0.34	584.5	0.07
575	R H GREN	8.010	81	462	0.10	360.0	0.02
576	COM GREN	0.045	5	461	0.01	31.2	0.00
577	N WOLFISH	1.935	81	462	0.02	361.9	0.01
578	ST WOLFISH	0.050	1	460	0.05	4.5	0.01
579	SP WOLFISH	3.775	109	467	0.03	533.1	0.01
580	EELPOUTS	5.235	109	465	0.05	525.7	0.01
581	EELPOUTARCT	0.030	1	470	0.03	5.0	0.01
582	REDFISHUNSP	6.905	96	463	0.07	447.4	0.02
583	PLAICE	18.691	118	467	0.16	584.5	0.03
584	WITCH	37.153	119	467	0.31	586.9	0.06
585	TURBOT	354.743	119	467	2.98	586.9	0.60
586	HALIBUT	0.020	2	450	0.01	12.4	0.00
587	BOREALIS SHRIMP	0.320	19	481	0.02	116.3	0.00
588	CANCER SP	0.017	4	454	0.00	24.0	0.00
UNITAREA		505.059					

DIRECT=TURBOT COUNTRY=POLAND MONTH=JULY NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
589	SKATES	0.925	6	472	0.15	39.7	0.02
590	TH SKATE	2.290	13	480	0.18	59.2	0.04
591	BLUE HAKE	0.900	1	480	0.90	5.0	0.18
592	COD	5.550	18	477	0.31	93.9	0.06
593	R H GREN	1.100	13	480	0.08	59.2	0.02
594	COM GREN	0.020	2	460	0.01	13.4	0.00
595	N WOLFISH	0.340	17	475	0.02	85.9	0.00
596	SP WOLFISH	0.500	19	477	0.03	58.9	0.01

ABLE 1a-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=POLAND MONTH=JULY NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
597	EELPOUTS	0.805	19	477	0.04	98.9	0.01
598	REDFISHUNSP	1.010	18	476	0.06	92.4	0.01
599	PLAICE	2.470	19	477	0.13	98.9	0.02
600	ITCH	4.250	18	477	0.24	94.9	0.04
601	TURBOT	62.067	19	477	3.27	98.9	0.63
602	BOREALIS SHRIMP	0.010	1	495	0.01	6.5	0.00
603	CANCER SP	0.003	1	450	0.00	7.3	0.00
UNITAREA		82.240					
NAFO		587.299					
MONTH		802.519					

DIRECT=TURBOT COUNTRY=POLAND MONTH=AUG NAFO=2H UNITAREA=212

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
604	TH SKATE	0.376	18	557	0.02	80.2	0.00
605	BNDOORSKATE	0.225	9	555	0.02	41.4	0.01
606	COD	4.080	19	562	0.21	84.7	0.05
607	IB ROCKLING	0.002	2	555	0.00	7.7	0.00
608	R H GREY	0.212	18	563	0.01	81.2	0.00
609	N WOLFISH	0.640	19	562	0.03	84.7	0.01
610	SP WOLFISH	0.010	1	530	0.01	4.5	0.00
611	EELPOUTS	0.137	18	563	0.01	80.2	0.00
612	REDFISHUNSP	0.003	2	545	0.00	8.0	0.00
613	MARINUS	0.002	1	570	0.00	4.5	0.00
614	MENTELLA	0.021	4	558	0.01	18.0	0.00
615	SCULPINS	0.003	2	570	0.00	8.6	0.00
616	FOURHORNSCULP	0.029	13	562	0.00	58.1	0.00
617	PLAICE	0.131	16	563	0.01	71.2	0.00
618	TURBOT	168.614	20	562	8.43	89.7	1.88
619	HALIBUT	0.075	10	568	0.01	42.3	0.00
620	OCTOPUSNS	0.013	12	565	0.00	53.2	0.00
621	BOREALIS SHRIMP	0.038	19	562	0.00	84.7	0.00
622	MONTAGUE SHRIMP	0.004	3	587	0.00	15.4	0.00
UNITAREA		174.615					

DIRECT=TURBOT COUNTRY=POLAND MONTH=AUG NAFO=2H UNITAREA=213

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
623	BL DOGFISH	0.001	1	525	0.00	3.5	0.00
624	SKATES	0.002	1	620	0.00	3.5	0.00
625	TH SKATE	0.050	2	590	0.02	8.0	0.01
626	BNDOORSKATE	0.040	2	590	0.02	7.5	0.01
627	DAGGERTOOTH	0.005	1	525	0.00	3.5	0.00
628	COD	0.302	3	568	0.10	11.5	0.03
629	IB ROCKLING	0.001	1	620	0.00	3.5	0.00
630	R H GREY	0.065	2	590	0.03	7.5	0.01
631	N WOLFISH	0.055	3	588	0.02	10.0	0.01
632	EELPOUTS	0.012	2	590	0.01	8.0	0.00

TABLE 1a-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=POLAND MONTH=AUG NAFO=2H UNITAREA=213

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
633	MARINUS	0.149	2	573	0.07	6.5	0.02
634	MENTELLA	1.600	2	573	0.80	6.5	0.25
635	FOURHORNSCULP	0.004	1	620	0.00	3.5	0.00
636	PLAICE	0.026	2	543	0.01	8.0	0.00
637	TURBOT	6.215	4	581	1.55	14.5	0.43
638	HALIBUT	0.145	4	581	0.04	14.5	0.01
639	OCTOPUSNS	0.004	4	581	0.00	14.5	0.00
640	BOREALIS SHRIMP	0.006	4	581	0.00	14.5	0.00
UNITAREA		8.682					
NAFO		183.297					

DIRECT=TURBOT COUNTRY=POLAND MONTH=AUG NAFO=3K UNITAREA=339

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
641	TH SKATE	0.68	17	472	0.04	78.2	0.01
642	COD	1.60	15	471	0.11	69.5	0.02
643	R H GREN	0.35	17	472	0.02	78.2	0.00
644	N WOLFISH	0.20	17	472	0.01	78.2	0.00
645	SP WOLFISH	0.18	17	472	0.01	78.2	0.00
646	EELPOUTS	0.26	17	472	0.02	78.2	0.00
647	REDFISHUNSP	0.27	17	472	0.02	78.2	0.00
648	PLAICE	1.42	16	471	0.09	74.5	0.02
649	WITCH	2.25	17	472	0.13	78.2	0.03
650	TURBOT	47.60	17	472	2.80	78.2	0.61
UNITAREA		54.81					

DIRECT=TURBOT COUNTRY=POLAND MONTH=AUG NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
651	TH SKATE	0.430	11	478	0.04	50.5	0.01
652	COD	1.250	11	478	0.11	50.5	0.02
653	R H GREN	0.300	11	478	0.03	50.5	0.01
654	N WOLFISH	0.130	11	478	0.01	50.5	0.00
655	SP WOLFISH	0.150	11	478	0.01	50.5	0.00
656	EELPOUTS	0.210	11	478	0.02	50.5	0.00
657	REDFISHUNSP	0.170	11	478	0.02	50.5	0.00
658	PLAICE	0.850	11	478	0.08	50.5	0.02
659	WITCH	1.350	11	478	0.12	50.5	0.03
660	TURBOT	25.650	11	478	2.33	50.5	0.51
UNITAREA		30.490					
NAFO		85.300					
MONTH		268.597					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=POLAND MONTH=SEPT NAFO=3K UNITAREA=339

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
661	SKATES	1.200	8	464	0.15	41.6	0.03
662	N WOLFISH	0.330	8	464	0.04	41.6	0.01
663	SP WOLFISH	0.120	3	467	0.04	16.2	0.01
664	PLAICE	0.800	8	464	0.10	41.6	0.02
665	ITCH	3.600	8	464	0.45	41.6	0.09
666	TURBOT	27.500	8	464	3.44	41.6	0.64
667	BOREALIS SHRIMP	0.027	8	464	0.00	41.6	0.00
668	SPINYCRABNS	0.150	8	464	0.02	41.6	0.00
UNITAREA		33.727					
NAFO		33.727					
MONTH		33.727					

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=2J UNITAREA=202

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
669	SKATES	7.230	63	374	0.11	219.7	0.03
670	CAPELIN	0.047	18	375	0.00	61.4	0.00
671	COD	45.800	64	374	0.72	223.7	0.20
672	R H GREN	9.195	58	372	0.16	198.9	0.05
673	RNGRENADIER	0.002	1	390	0.00	5.0	0.00
674	N WOLFISH	1.820	54	377	0.03	191.0	0.01
675	SP WOLFISH	1.619	50	378	0.03	174.5	0.01
676	EELPOUTS	0.019	3	383	0.01	13.3	0.00
677	REDFISHUNSP	1.650	22	365	0.07	76.7	0.02
678	MENTELLA	0.010	2	385	0.00	9.0	0.00
679	PLAICE	2.138	29	380	0.07	100.4	0.02
680	ITCH	53.369	64	374	0.83	223.7	0.24
681	TURBOT	155.198	64	374	2.42	223.7	0.69
682	HALIBUT	0.005	1	350	0.00	3.5	0.00
683	BOREALIS SHRIMP	0.044	40	379	0.00	139.0	0.00
684	SPINYCRABNS	0.398	40	379	0.01	139.0	0.00
685	SNOW CRAB	1.075	15	361	0.07	53.2	0.02
UNITAREA		279.619					

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=2J UNITAREA=203

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
686	SKATES	0.120	2	403	0.06	6	0.02
687	COD	0.050	1	495	0.05	4	0.01
688	R H GREN	0.230	2	403	0.11	6	0.04
689	SP WOLFISH	0.010	1	495	0.01	4	0.00
690	REDFISHUNSP	3.800	2	403	1.90	6	0.63
691	WITCH	2.100	1	495	2.10	4	0.52
692	TURBOT	1.075	2	403	0.54	6	0.18
693	SNOW CRAB	0.075	1	495	0.07	4	0.02
UNITAREA		7.460					

TABLE 1a-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=2J UNITAREA=204

	OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
	694	BL DOGFISH	0.010	1	430	0.01	1	0.01
	695	SKATES	0.005	1	430	0.00	1	0.00
	696	R H GREN	0.025	1	430	0.02	1	0.02
	697	REDFISHUNSP	1.500	1	430	1.50	1	1.50
	698	TURBOT	0.100	1	430	0.10	1	0.10
UNITAREA			1.640					

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=2J UNITAREA=206

	OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
	699	SKATES	0.620	7	612	0.09	21.5	0.03
	700	CAPELIN	0.008	6	598	0.00	19.3	0.00
	701	COD	1.770	8	604	0.22	24.7	0.07
	702	R H GREN	0.230	6	598	0.04	19.3	0.01
	703	N WOLFISH	0.210	8	604	0.03	24.7	0.01
	704	SP WOLFISH	0.160	7	591	0.02	22.5	0.01
	705	REDFISHUNSP	4.300	6	549	0.72	19.0	0.23
	706	PLAICE	0.160	6	598	0.03	19.3	0.01
	707	WITCH	0.600	7	612	0.09	21.5	0.03
	708	TURBOT	3.400	7	612	0.49	21.5	0.16
	709	BOREALIS SHRIMP	0.006	6	598	0.00	19.3	0.00
	710	SPINYCRABNS	0.085	6	598	0.01	19.3	0.00
UNITAREA			11.549					

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=2J UNITAREA=207

	OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
	711	SKATES	0.050	1	365	0.05	3.5	0.01
	712	CAPELIN	0.002	2	333	0.00	6.5	0.00
	713	COD	5.000	3	325	1.67	10.1	0.50
	714	R H GREN	0.320	3	325	0.11	10.1	0.03
	715	N WOLFISH	0.080	3	325	0.03	10.1	0.01
	716	SP WOLFISH	0.025	1	300	0.02	3.0	0.01
	717	REDFISHUNSP	0.020	1	310	0.02	3.6	0.01
	718	PLAICE	0.100	2	333	0.05	6.5	0.02
	719	WITCH	0.425	3	325	0.14	10.1	0.04
	720	TURBOT	6.175	3	325	2.06	10.1	0.61
	721	BOREALIS SHRIMP	0.002	2	333	0.00	6.5	0.00
	722	SPINYCRABNS	0.025	2	333	0.01	6.5	0.00
UNITAREA			12.224					
NAFO			312.497					

TABLE 1a-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=3K UNITAREA=337

	OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
	723	SKATES	0.075	1	425	0.07	3.5	0.02
	724	COD	0.250	1	425	0.25	3.5	0.07
	725	R H GREN	0.005	1	425	0.00	3.5	0.00
	726	N WOLFISH	0.005	1	425	0.00	3.5	0.00
	727	EELPOUTS	0.005	1	425	0.00	3.5	0.00
	728	PLAICE	0.050	1	425	0.05	3.5	0.01
	729	WITCH	0.275	1	425	0.27	3.5	0.08
	730	TURBOT	1.050	1	425	1.05	3.5	0.30
UNITAREA			1.715					

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=3K UNITAREA=339

	OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
	731	GL SHARK	0.925	2	450	0.46	7.5	0.12
	732	SKATES	19.321	99	448	0.20	415.2	0.05
	733	COD	16.445	88	448	0.19	366.1	0.04
	734	R H GREN	1.500	70	446	0.02	273.6	0.01
	735	RNGRENADIER	0.009	3	467	0.00	15.5	0.00
	736	N WOLFISH	3.017	86	451	0.04	368.8	0.01
	737	SP WOLFISH	2.743	82	450	0.03	349.2	0.01
	738	EELPOUTS	0.190	28	440	0.01	107.9	0.00
	739	REDFISHUNSP	0.534	22	450	0.02	84.4	0.01
	740	PLAICE	17.728	96	449	0.13	408.6	0.03
	741	WITCH	59.226	100	448	0.59	420.6	0.14
	742	TURBOT	220.207	100	448	2.20	420.6	0.52
	743	MONKFISH	0.001	1	450	0.00	4.5	0.00
	744	BOREALIS SHRIMP	0.105	65	452	0.00	282.8	0.00
	745	SPINYCRABNS	0.591	59	453	0.01	262.1	0.00
UNITAREA			337.542					

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=3K UNITAREA=34[illegible]

	OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
	746	COD	0.125	1	340	0.13	2	0.06
	747	R H GREN	0.020	1	340	0.02	2	0.01
	748	REDFISHUNSP	4.000	1	340	4.00	2	2.00
	749	TURBOT	0.015	1	340	0.01	2	0.01
UNITAREA			4.160					

TABLE 1a-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY:1983. CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
750	SKATES	0.450	6	463	0.07	24.1	0.02
751	COD	0.920	5	463	0.18	22.1	0.04
752	R H GREN	0.065	3	463	0.02	12.0	0.01
753	N WOLFISH	0.195	6	463	0.03	24.1	0.01
754	SP WOLFISH	0.187	6	463	0.03	24.1	0.01
755	EELPOUTS	0.005	1	460	0.00	4.0	0.00
756	PLAICE	0.400	5	463	0.08	22.1	0.02
757	WITCH	2.450	6	463	0.41	24.1	0.09
758	TURBOT	8.150	6	463	1.36	24.1	0.31
759	BOREALIS SHRIMP	0.007	5	463	0.00	23.1	0.00
760	SPINYCRABNS	0.033	5	463	0.01	22.1	0.00
UNITAREA		12.862					
NAFO		356.279					
MONTH		668.771					

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2J UNITAREA=202

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
761	GL SHARK	0.70	1	350	0.70	3.0	0.23
762	SKATES	18.29	184	371	0.10	750.9	0.02
763	COD	156.93	188	371	0.83	766.4	0.20
764	R H GREN	10.33	123	373	0.08	512.4	0.02
765	RNGRENADIER	2.01	40	384	0.05	156.6	0.01
766	N WOLFISH	4.65	164	370	0.03	677.4	0.01
767	ST WOLFISH	0.00	1	380	0.00	4.0	0.00
768	SP WOLFISH	1.02	70	372	0.01	280.2	0.00
769	EELPOUTS	0.48	69	367	0.01	273.3	0.00
770	LAVALS EELPOUT	0.34	32	388	0.01	131.9	0.00
771	COMMONPOUT	0.10	19	387	0.01	81.0	0.00
772	WOLFEELNS	0.00	1	400	0.00	4.3	0.00
773	REDFISHUNSP	2.00	86	381	0.02	349.8	0.01
774	MENTELLA	0.39	6	356	0.06	22.8	0.02
775	LUMPFISH	0.02	4	390	0.00	16.8	0.00
776	PLAICE	6.33	146	371	0.04	607.8	0.01
777	WITCH	21.56	178	374	0.12	726.1	0.03
778	YELLOWTAIL	0.05	5	382	0.01	21.0	0.00
779	TURBOT	1025.44	188	371	5.45	766.4	1.34
780	HALIBUT	0.00	1	380	0.00	4.2	0.00
781	BOREALIS SHRIMP	0.01	7	363	0.00	24.1	0.00
782	SPINYCRABNS	0.55	54	361	0.01	233.3	0.00
783	SNOW CRAB	1.03	27	374	0.04	105.2	0.01
UNITAREA		1252.23					

TABLE 1a-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2J UNITAREA=206

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
784	SKATES	0.120	1	390	0.12	2.7	0.04
785	COD	0.301	1	390	0.30	2.7	0.11
786	RNGRENADIER	0.100	1	390	0.10	2.7	0.04
787	N WOLFISH	0.005	1	390	0.00	2.7	0.00
788	SP WOLFISH	0.003	1	390	0.00	2.7	0.00
789	EELPOUTS	0.002	1	390	0.00	2.7	0.00
790	REDFISHUNSP	0.003	1	390	0.00	2.7	0.00
791	PLAICE	0.039	1	390	0.04	2.7	0.01
792	WITCH	0.036	1	390	0.04	2.7	0.01
793	TURBOT	2.823	1	390	2.82	2.7	1.05
UNITAREA		3.432					

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2J UNITAREA=207

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
794	SKATES	7.676	81	298	0.09	276.8	0.03
795	CAPELIN	0.009	9	292	0.00	29.4	0.00
796	COD	75.325	87	300	0.87	299.5	0.25
797	R H GREN	1.640	60	298	0.03	203.4	0.01
798	RNGRENADIER	0.100	2	300	0.05	4.0	0.01
799	N WOLFISH	7.747	87	300	0.09	299.0	0.03
800	SP WOLFISH	0.884	40	299	0.02	141.0	0.01
801	EELPOUTS	0.211	28	302	0.01	101.7	0.00
802	LAVALS EELPOUT	0.095	5	330	0.02	19.0	0.01
803	COMMONPOUT	0.020	4	318	0.00	15.1	0.00
804	REDFISHUNSP	1.631	13	311	0.13	42.2	0.04
805	MENTELLA	0.005	1	300	0.00	4.0	0.00
806	LUMPFISHNS	0.002	1	300	0.00	4.0	0.00
807	LUMPFISH	0.006	3	317	0.00	11.2	0.00
808	PLAICE	6.586	86	299	0.08	295.0	0.02
809	WITCH	4.603	70	300	0.07	236.7	0.02
810	YELLOWTAIL	0.055	4	330	0.01	16.0	0.00
811	TURBOT	357.415	86	300	4.16	296.5	1.21
812	BOREALIS SHRIMP	0.004	4	289	0.00	14.5	0.00
813	SPINYCRABNS	0.446	33	300	0.01	107.3	0.00
814	SNOW CRAB	1.585	31	286	0.05	108.3	0.01
UNITAREA		466.045					

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2J UNITAREA=210

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
815	SKATES	0.05	3	453	0.02	10.2	0.00
816	COD	0.70	3	453	0.23	10.2	0.07
817	R H GREN	0.02	1	580	0.02	4.3	0.01
818	N WOLFISH	0.12	3	453	0.04	10.2	0.01
819	SP WOLFISH	0.01	1	580	0.01	4.3	0.00
820	LAVALS EELPOUT	0.01	1	540	0.01	4.0	0.00
821	COMMONPOUT	0.00	1	540	0.00	4.0	0.00

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

a

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2J UNITAREA=210

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
822	REDFISHUNSP	0.07	2	560	0.04	8.3	0.01
823	PLAICE	0.11	3	453	0.04	10.2	0.01
824	WITCH	0.20	3	453	0.07	10.2	0.02
825	TURBOT	5.60	3	453	1.87	10.2	0.55
UNITAREA		6.91					
NAFO		1728.62					
MONTH		1728.62					

DIRECT=TURBOT COUNTRY=POLAND MONTH=DEC NAFO=2H UNITAREA=212

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
826	SKATES	0.205	7	603	0.03	31.4	0.01
827	COD	0.060	2	610	0.03	9.5	0.01
828	R H GREN	0.035	5	620	0.01	22.0	0.00
829	N WOLFISH	0.540	7	603	0.08	31.4	0.02
830	PLAICE	1.650	7	603	0.24	31.4	0.05
831	TURBOT	32.500	7	603	4.64	31.4	1.04
832	HALIBUT	0.060	5	592	0.01	22.8	0.00
UNITAREA		35.050					

DIRECT=TURBOT COUNTRY=POLAND MONTH=DEC NAFO=2H UNITAREA=213

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
833	GL SHARK	0.80	1	780	0.80	2.4	0.33
834	SKATES	0.71	27	617	0.03	117.5	0.01
835	COD	0.10	9	597	0.01	39.9	0.00
836	R H GREN	0.30	24	657	0.01	99.0	0.00
837	N WOLFISH	1.55	28	621	0.06	119.9	0.01
838	SP WOLFISH	0.02	1	470	0.02	4.5	0.00
839	REDFISHUNSP	0.14	5	704	0.03	19.9	0.01
840	MARINUS	0.04	2	825	0.02	6.0	0.01
841	PLAICE	4.51	31	642	0.15	129.1	0.03
842	WITCH	0.02	4	609	0.00	16.6	0.00
843	TURBOT	125.20	31	642	4.04	129.1	0.97
844	HALIBUT	0.58	26	653	0.02	106.8	0.01
UNITAREA		133.99					
NAFO		169.04					
MONTH		169.04					
COUNTRY		5534.39					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1983. CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=USSR MONTH=AUG NAFO=0 UNITAREA=[a]

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
845	GL SHARK	2.500	3	837	0.83	8.3	0.30
846	DOGFISHNS	0.012	3	872	0.00	8.0	0.00
847	DOGFISH	1.120	27	850	0.04	76.0	0.01
848		0.420	12	867	0.03	31.9	0.01
849	SKATES	3.399	35	846	0.10	97.2	0.03
850	JENSENSKATE	3.245	40	872	0.08	114.2	0.03
851	BNDOORSKATE	0.240	1	890	0.24	2.5	0.10
852	VIPERFISH	0.017	16	877	0.00	46.7	0.00
853	MYCTOPHIDNS	0.019	15	885	0.00	45.0	0.00
854	BLUE HAKE	0.025	14	873	0.00	41.0	0.00
855	R H GREN	1.522	46	868	0.03	134.3	0.01
856	RNGRENADIER	9.625	75	860	0.13	211.1	0.05
857	N WOLFISH	3.133	63	859	0.05	177.5	0.02
858	REDFISHUNSP	0.140	26	854	0.01	71.4	0.00
859	TURBOT	126.391	75	860	1.69	211.1	0.50
860	HALIBUT	0.043	8	866	0.01	21.1	0.00
861	OCTOPUSNS	0.038	20	878	0.00	59.5	0.00
862	PANDALUSNS	0.005	5	881	0.00	14.5	0.00
863	NEOLITHODES	0.115	11	862	0.01	28.6	0.00
864	CANCERNS	0.009	7	880	0.00	20.5	0.00
UNITAREA		152.018					
NAFO		152.018					
MONTH		152.018					

DIRECT=TURBOT COUNTRY=USSR MONTH=SEPT NAFO=0 UNITAREA=[a]

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
865	DOGFISHNS	0.219	37	874	0.01	116.4	0.00
866	DOGFISH	0.210	4	896	0.05	11.9	0.02
867		2.010	28	890	0.07	88.1	0.02
868	BL DOGFISH	0.282	30	831	0.01	93.1	0.00
869	BASK SHARK	2.500	3	850	0.83	9.2	0.27
870	SKATES	4.034	81	806	0.05	253.7	0.02
871	JENSENSKATE	8.336	204	848	0.04	622.3	0.01
872	BNDOORSKATE	0.385	14	829	0.03	43.8	0.01
873	VIPERFISH	0.071	56	868	0.00	172.8	0.00
874	DAGGERTOOTH	0.002	2	805	0.00	6.3	0.00
875	MYCTOPHIDNS	0.111	91	857	0.00	272.3	0.00
876	SCOPELOSAURUS	0.005	5	915	0.00	13.4	0.00
877	SNIPE EEL	0.011	7	708	0.00	21.3	0.00
878	TAPIRFISH	0.022	9	837	0.00	27.7	0.00
879	BLUE HAKE	0.037	28	835	0.00	84.9	0.00
880	TB ROCKLING	0.009	8	863	0.00	24.2	0.00
881	GRENADIERNS	0.015	1	690	0.01	3.3	0.00
882	R H GREN	1.485	116	855	0.01	355.5	0.00
883	COM GREN	0.015	7	711	0.00	12.9	0.00
884	RNGRENADIER	17.126	282	837	0.06	871.1	0.02
885	482	0.001	1	920	0.00	2.8	0.00
886	N WOLFISH	16.956	293	835	0.06	901.1	0.02
887	SP WOLFISH	0.022	4	739	0.01	13.2	0.00
888	REDFISHUNSP	1.792	101	826	0.02	312.2	0.01

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1983. CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

a

DIRECT=TURBOT COUNTRY=USSR MONTH=SEPT NAFO=0 UNITAREA=.

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
889	MARINUS	0.310	21	702	0.01	61.7	0.01
890	MENTELLA	1.418	61	728	0.02	190.3	0.01
891	SCULPINS	0.044	30	837	0.00	91.3	0.00
892	FOURHORNSCULP	0.007	7	734	0.00	18.9	0.00
893	PLAICE	0.001	1	710	0.00	2.7	0.00
894	TURBOT	777.220	308	834	2.52	947.4	0.82
895	HALIBUT	0.261	28	789	0.01	83.3	0.00
896	1085	0.125	1	905	0.13	2.8	0.04
897	SQUIDNS	0.001	1	920	0.00	3.0	0.00
898	OCTOPUSNS	0.515	105	859	0.00	353.8	0.00
899	4868	0.010	2	930	0.00	5.9	0.00
900	4904	0.001	1	870	0.00	3.0	0.00
901	PANDALUSNS	0.037	37	861	0.00	112.7	0.00
902	SPINYCRABNS	0.001	1	905	0.00	3.2	0.00
903	NEOLITHODES	0.900	105	817	0.01	326.4	0.00
904	CANCERNS	0.516	81	873	0.01	245.1	0.00
UNITAREA		837.023					
NAFO		837.023					
MONTH		837.023					

DIRECT=TURBOT COUNTRY=USSR MONTH=OCT NAFO=0 UNITAREA=.

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
905	GL SHARK	0.250	1	730	0.25	1.8	0.14
906	BL DOGFISH	0.027	4	810	0.01	12.4	0.00
907	SKATES	0.490	15	738	0.03	45.3	0.01
908	JENSENSKATE	0.230	8	699	0.03	24.2	0.01
909	VIPERFISH	0.002	2	698	0.00	6.2	0.00
910	MYCTOPHIDNS	0.001	1	705	0.00	3.2	0.00
911	SNIPE EEL	0.002	1	705	0.00	3.2	0.00
912	TB ROCKLING	0.001	1	690	0.00	3.0	0.00
913	GRENADIERNS	0.010	1	705	0.01	3.2	0.00
914	R H GREN	0.040	3	700	0.01	9.4	0.00
915	COM GREN	0.001	1	705	0.00	3.2	0.00
916	RNGRENADIER	1.875	25	722	0.07	75.7	0.02
917	N WOLFISH	0.869	26	721	0.03	78.9	0.01
918	REDFISHUNSP	0.388	6	699	0.06	18.1	0.02
919	MARINUS	0.017	2	705	0.01	6.4	0.00
920	MENTELLA	0.284	16	733	0.02	47.5	0.01
921	SCULPINS	0.001	1	690	0.00	3.0	0.00
922	TURBOT	51.513	27	721	1.91	82.2	0.63
923	HALIBUT	0.169	7	709	0.02	21.8	0.01
924	OCTOPUSNS	0.006	3	700	0.00	9.4	0.00
925	NEOLITHODES	0.040	10	722	0.00	30.1	0.00
UNITAREA		56.216					
NAFO		56.216					
MONTH		56.216					

TABLE 1a-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1983, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=USSR MONTH=DEC NAFO=2G UNITAREA=219

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
926	RNGRENADIER	0.5	1	1000	0.50	1	0.50
927	N WOLFISH	0.5	1	1000	0.50	1	0.50
928	TURBOT	2.0	1	1000	2.00	1	2.00
UNITAREA		3.0					
NAFO		3.0					

DIRECT=TURBOT COUNTRY=USSR MONTH=DEC NAFO=2H UNITAREA=213

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
929	SKATES	1.20	8	1078	0.15	14.0	0.09
930	RNGRENADIER	4.01	21	1056	0.19	39.8	0.10
931	N WOLFISH	5.59	28	1034	0.20	58.0	0.10
932	TURBOT	51.05	28	1034	1.82	58.0	0.88
UNITAREA		61.85					

DIRECT=TURBOT COUNTRY=USSR MONTH=DEC NAFO=2H UNITAREA=216

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
933	RNGRENADIER	0.50	1	1150	0.50	2.2	0.23
934	N WOLFISH	0.20	1	1150	0.20	2.2	0.09
935	TURBOT	2.00	1	1150	2.00	2.2	0.91
UNITAREA		2.70					
NAFO		64.55					
MONTH		67.55					
COUNTRY		1112.81					
DIRECT		8418.90					
		8418.90					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1984, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

b

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=MAY NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
1	SKATES	2.430	19	470	0.13	57.5	0.04
2	COD	5.045	21	470	0.24	63.5	0.08
3	R H GREN	2.532	20	470	0.13	60.5	0.04
4	N WOLFISH	1.440	18	470	0.08	54.2	0.03
5	SP WOLFISH	1.210	18	470	0.07	54.2	0.02
6	EELPOUTS	0.027	15	468	0.00	45.5	0.00
7	REDFISHUNSP	2.320	21	470	0.11	63.5	0.04
8	PLAICE	1.295	21	470	0.06	63.5	0.02
9	WITCH	17.324	21	470	0.82	63.5	0.27
10	TURBOT	58.878	21	470	2.80	63.5	0.93
11	HALIBUT	0.032	4	470	0.01	12.2	0.00
12	MONKFISH	0.010	1	476	0.01	3.0	0.00
13	4894	0.001	1	461	0.00	2.8	0.00
14	BOREALIS SHRIMP	0.019	19	471	0.00	57.7	0.00
UNITAREA		92.563					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=MAY NAFO=3K UNITAREA=345

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
15	SKATES	0.320	1	484	0.32	3	0.11
16	387	0.002	1	484	0.00	3	0.00
17	COD	0.241	1	484	0.24	3	0.08
18	R H GREN	0.200	1	484	0.20	3	0.07
19	N WOLFISH	0.100	1	484	0.10	3	0.03
20	SP WOLFISH	0.120	1	484	0.12	3	0.04
21	EELPOUTS	0.002	1	484	0.00	3	0.00
22	REDFISHUNSP	0.120	1	484	0.12	3	0.04
23	PLAICE	0.040	1	484	0.04	3	0.01
24	WITCH	0.860	1	484	0.86	3	0.29
25	TURBOT	2.600	1	484	2.60	3	0.87
26	HALIBUT	0.002	1	484	0.00	3	0.00
27	BOREALIS SHRIMP	0.001	1	484	0.00	3	0.00
UNITAREA		4.608					
NAFO		97.171					
MONTH		97.171					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=3K UNITAREA=336

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
28	SKATES	3.900	5	478	0.78	22	0.18
29	COD	0.305	5	478	0.06	22	0.01
30	R H GREN	0.150	3	481	0.05	13	0.01
31	N WOLFISH	0.100	1	475	0.10	6	0.02
32	SP WOLFISH	0.060	2	474	0.03	9	0.01
33	EELPOUTS	0.300	4	474	0.07	19	0.02
34	REDFISHUNSP	0.020	2	474	0.01	10	0.00
35	PLAICE	0.300	5	478	0.06	22	0.01
36		0.050	1	493	0.05	3	0.02

ABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1984, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

b

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=3K UNITAREA=339

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
37	WITCH	2.700	5	478	0.54	22	0.12
38	TURBOT	11.660	5	478	2.33	22	0.53
39	HALIBUT	0.010	1	472	0.01	4	0.00
UNITAREA		19.555					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=3K UNITAREA=343

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
40	SKATES	5.400	9	452	0.60	38.6	0.14
41	COD	5.290	8	452	0.66	33.1	0.16
42	R H GREN	0.230	8	456	0.03	37.1	0.01
43	SP WOLFISH	0.270	6	454	0.04	27.8	0.01
44	EELPOUTS	0.060	4	450	0.01	18.5	0.00
45	REDFISHUNSP	1.620	9	455	0.18	40.1	0.04
46	WITCH	0.800	9	452	0.09	38.6	0.02
47	TURBOT	25.055	9	452	2.78	38.6	0.65
UNITAREA		38.725					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
48	SKATES	6.10	15	477	0.41	66.1	0.09
49	COD	2.41	15	477	0.16	66.1	0.04
50	R H GREN	0.35	10	477	0.03	44.8	0.01
51	N WOLFISH	0.07	2	475	0.03	8.8	0.01
52	SP WOLFISH	0.42	12	478	0.03	49.8	0.01
53	EELPOUTS	0.17	9	475	0.02	37.7	0.00
54	REDFISHUNSP	0.91	14	476	0.06	63.6	0.01
55	PLAICE	0.10	3	472	0.03	15.0	0.01
56	WITCH	5.25	15	477	0.35	66.1	0.08
57	TURBOT	29.46	15	477	1.96	66.1	0.45
58	HALIBUT	0.01	1	457	0.01	6.0	0.00
UNITAREA		45.25					
NAFO		103.53					
MONTH		103.53					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1984, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

b

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2H UNITAREA=212

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
59	GL SHARK	3.200	2	577	1.60	6.3	0.51
60	SKATES	1.590	27	572	0.06	86.5	0.02
61	COD	0.645	20	567	0.03	63.8	0.01
62	N WOLFISH	1.050	26	574	0.04	83.3	0.01
63	SP WOLFISH	0.025	2	544	0.01	6.0	0.00
64	REDFISHUNSP	0.075	10	580	0.01	33.0	0.00
65	PLAICE	0.640	25	573	0.03	80.3	0.01
66	TURBOT	146.700	27	572	5.43	86.5	1.70
67	HALIBUT	0.200	15	570	0.01	48.1	0.00
68	BOREALIS SHRIMP	0.019	11	578	0.00	35.4	0.00
UNITAREA		154.144					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2H UNITAREA=215

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
69	GL SHARK	1.500	1	586	1.50	3.7	0.41
70	SKATES	1.140	20	571	0.06	63.4	0.02
71	COD	0.350	14	564	0.02	44.6	0.01
72	N WOLFISH	0.605	18	568	0.03	58.7	0.01
73	REDFISHUNSP	0.020	3	581	0.01	11.2	0.00
74	PLAICE	0.500	19	570	0.03	59.7	0.01
75	TURBOT	101.000	20	571	5.05	63.4	1.59
76	HALIBUT	0.127	10	574	0.01	31.8	0.00
77	BOREALIS SHRIMP	0.013	7	584	0.00	22.6	0.00
UNITAREA		105.255					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2H UNITAREA=216

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
78	SKATES	0.100	1	590	0.10	3.5	0.03
79	N WOLFISH	0.050	1	590	0.05	3.5	0.01
80	PLAICE	0.005	1	590	0.00	3.5	0.00
81	TURBOT	6.000	1	590	6.00	3.5	1.71
82	HALIBUT	0.010	1	590	0.01	3.5	0.00
83	BOREALIS SHRIMP	0.002	1	590	0.00	3.5	0.00
UNITAREA		6.167					
NAFO		265.566					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1984. CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

b

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2J UNITAREA=210

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
84	SKATES	0.275	6	536	0.05	17.9	0.02
85	COD	0.260	6	536	0.04	17.9	0.01
86	N WOLFISH	0.300	6	536	0.05	17.9	0.02
87	SP.WOLFISH	0.135	5	537	0.03	15.1	0.01
88	REDFISHUNSP	0.025	3	537	0.01	8.8	0.00
89	PLAICE	0.060	5	535	0.01	14.9	0.00
90	WITCH	0.005	1	545	0.00	3.0	0.00
91	TURBOT	15.600	6	536	2.60	17.9	0.87
UNITAREA		16.660					
NAFO		16.660					
MONTH		282.226					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2H UNITAREA=212

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
92	SKATES	1.270	14	564	0.09	57.6	0.02
93	COD	0.245	13	564	0.02	53.6	0.00
94	RNGRENADIER	0.050	4	558	0.01	15.9	0.00
95	N WOLFISH	0.670	14	564	0.05	57.6	0.01
96	REDFISHUNSP	0.040	3	556	0.01	12.4	0.00
97	PLAICE	0.320	14	564	0.02	57.6	0.01
98	TURBOT	50.580	14	564	3.61	57.6	0.88
99	HALIBUT	0.060	4	551	0.01	17.9	0.00
100	BOREALIS SHRIMP	0.005	3	561	0.00	13.6	0.00
UNITAREA		53.240					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2H UNITAREA=215

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
101	SKATES	1.050	11	573	0.10	44.6	0.02
102	COD	0.185	9	571	0.02	36.0	0.01
103	RNGRENADIER	0.020	5	586	0.00	20.0	0.00
104	N WOLFISH	0.570	11	573	0.05	44.6	0.01
105	EELPOUTS	0.010	1	556	0.01	4.5	0.00
106	REDFISHUNSP	0.025	6	586	0.00	24.3	0.00
107	PLAICE	0.220	8	569	0.03	33.3	0.01
108	TURBOT	48.870	11	573	4.44	44.6	1.10
109	HALIBUT	0.150	9	577	0.02	37.1	0.00
110	BOREALIS SHRIMP	0.003	3	585	0.00	12.3	0.00
UNITAREA		51.103					
NAFO		104.343					

TABLE 1b-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1984, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2J UNITAREA=203

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
111	SKATES	0.08	2	543	0.04	6.8	0.01
112	RNGRENADIER	0.06	2	543	0.03	6.8	0.01
113	N WOLFISH	0.13	2	543	0.06	6.8	0.02
114	REDFISHUNSP	0.03	1	538	0.03	3.8	0.01
115	PLAICE	0.08	2	543	0.04	6.8	0.01
116	WITCH	0.14	2	543	0.07	6.8	0.02
117	TURBOT	3.10	2	543	1.55	6.8	0.46
UNITAREA		3.62					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2J UNITAREA=207

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
118	SKATES	0.030	1	531	0.03	5	0.01
119	N WOLFISH	0.060	1	531	0.06	5	0.01
120	WITCH	0.005	1	531	0.00	5	0.00
121	TURBOT	5.200	1	531	5.20	5	1.04
122	SNOW CRAB	0.010	1	531	0.01	5	0.00
UNITAREA		5.305					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2J UNITAREA=210

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
123	SKATES	0.490	11	534	0.04	36.2	0.01
124	COD	0.075	8	533	0.01	26.6	0.00
125	RNGRENADIER	0.032	6	536	0.01	19.1	0.00
126	N WOLFISH	0.560	11	534	0.05	36.2	0.02
127	WITCH	0.085	10	534	0.01	33.3	0.00
128	TURBOT	51.150	11	534	4.65	36.2	1.41
129	HALIBUT	0.020	2	536	0.01	6.2	0.00
130	BOREALIS SHRIMP	0.013	9	534	0.00	30.4	0.00
131	SNOW CRAB	0.053	10	534	0.01	33.3	0.00
UNITAREA		52.478					
NAFO		61.403					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=3K UNITAREA=343

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
132	SKATES	0.060	1	442	0.06	4	0.01
133	COD	0.080	1	442	0.08	4	0.02
134	N WOLFISH	0.040	1	442	0.04	4	0.01
135	WITCH	0.060	1	442	0.06	4	0.01
136	TURBOT	0.700	1	442	0.70	4	0.17
UNITAREA		0.940					
NAFO		0.940					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1984, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

b

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=3K UNITAREA=343

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
MONTH		166.686					
COUNTRY		649.613					

DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=2J UNITAREA=203

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
137	GL SHARK	0.800	1	580	0.80	2.6	0.31
138	SKATES	1.890	45	554	0.04	131.2	0.01
139	COD	0.010	1	564	0.01	2.5	0.00
140	RNGRENADIER	2.345	46	555	0.05	133.8	0.02
141	N WOLFISH	0.645	28	559	0.02	85.9	0.01
142	SP WOLFISH	0.035	3	524	0.01	8.4	0.00
143	REDFISHUNSP	1.570	41	554	0.04	121.0	0.01
144	PLAICE	0.095	4	533	0.02	10.9	0.01
145	WITCH	12.635	48	555	0.26	140.1	0.09
146	TURBOT	102.497	48	555	2.14	140.1	0.73
147	HALIBUT	0.063	8	558	0.01	26.9	0.00
UNITAREA		122.585					

DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=2J UNITAREA=206

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
148	DOGFISH	0.03	1	575	0.03	1.8	0.02
149	SKATES	0.10	1	575	0.10	1.8	0.06
150	RNGRENADIER	0.05	1	575	0.05	1.8	0.03
151	ST WOLFISH	0.10	1	575	0.10	1.8	0.06
152	REDFISHUNSP	1.10	3	503	0.37	8.2	0.13
153	TURBOT	1.75	3	503	0.58	8.2	0.21
UNITAREA		3.13					

DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=2J UNITAREA=207

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
154		0.100	1	500	0.10	2.0	0.05
155	SKATES	0.025	1	560	0.02	6.4	0.00
156	COD	0.050	1	560	0.05	6.4	0.01
157	N WOLFISH	0.035	2	530	0.02	8.4	0.00
158	PLAICE	0.200	2	555	0.10	10.6	0.02
159	WITCH	0.100	2	555	0.05	10.6	0.01
160	TURBOT	7.000	3	537	2.33	12.6	0.56
UNITAREA		7.510					

55

TABLE 1b-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1984, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=2J UNITAREA=210

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
161	GL SHARK	0.300	1	500	0.30	5.6	0.05
162	SKATES	0.910	47	543	0.02	169.3	0.01
163	COD	2.038	44	541	0.05	165.9	0.01
164	RNGRENADIER	0.182	15	535	0.01	56.8	0.00
165	N WOLFISH	4.840	41	538	0.12	148.9	0.03
166	ST WOLFISH	0.340	8	560	0.04	28.6	0.01
167	SP WOLFISH	0.014	2	564	0.01	4.8	0.00
168	REDFISHUNSP	0.010	1	570	0.01	3.4	0.00
169	PLAICE	0.640	29	539	0.02	116.6	0.01
170	WITCH	2.150	43	542	0.05	184.0	0.01
171	TURBOT	152.943	53	545	2.89	191.3	0.80
172	BOREALIS SHRIMP	0.020	3	487	0.01	15.1	0.00
173	SNOW CRAB	0.077	8	527	0.01	33.6	0.00
UNITAREA		164.504					
NAFO		297.729					

DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=3K UNITAREA=343

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
174	SKATES	0.20	2	455	0.10	5.3	0.04
175	COD	0.01	1	510	0.01	3.4	0.00
176	ST WOLFISH	0.10	1	455	0.10	3.3	0.03
177	REDFISHUNSP	0.30	2	510	0.15	5.8	0.05
178	PLAICE	0.17	5	497	0.03	14.1	0.01
179	WITCH	0.26	4	483	0.06	11.1	0.02
180	TURBOT	4.10	5	497	0.82	14.1	0.29
UNITAREA		5.14					

DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
181	SKATES	0.250	7	360	0.04	9.9	0.03
182	COD	0.493	9	336	0.05	9.2	0.05
183	RNGRENADIER	0.010	1	320	0.01	1.0	0.01
184	N WOLFISH	0.625	9	319	0.07	7.5	0.08
185	SP WOLFISH	0.130	3	382	0.06	3.8	0.04
186	REDFISHUNSP	23.805	10	332	2.38	10.1	2.36
187	PLAICE	0.055	5	349	0.01	5.8	0.01
188	WITCH	0.740	2	462	0.37	5.1	0.15
189	TURBOT	2.817	6	365	0.47	8.2	0.34
190	HALIBUT	0.005	1	315	0.00	1.0	0.00
UNITAREA		28.930					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1984, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=3K UNITAREA=345

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
191	COD	0.030	1	330	0.03	1.8	0.02
192	REDFISHUNSP	7.000	1	330	7.00	1.8	3.89
193	TURBOT	0.050	1	330	0.05	1.8	0.03
UNITAREA		7.080					
NAFO		41.150					
MONTH		338.879					

DIRECT=TURBOT COUNTRY=JAPAN MONTH=NOV NAFO=2J UNITAREA=201

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
194	SKATES	0.200	3	482	0.07	8.6	0.02
195	COD	0.070	2	450	0.03	5.5	0.01
196	R H GREN	0.430	4	454	0.11	10.6	0.04
197	N WOLFISH	0.310	3	477	0.10	8.5	0.04
198	REDFISHUNSP	1.310	3	428	0.44	7.1	0.18
199	SCULPINS	0.005	1	530	0.00	3.0	0.00
200	LUMPFISH	0.020	2	530	0.01	6.5	0.00
201	PLAICE	0.030	1	530	0.03	3.0	0.01
202	WITCH	0.580	3	428	0.19	7.1	0.08
203	TURBOT	2.880	4	454	0.72	10.6	0.27
UNITAREA		5.835					

DIRECT=TURBOT COUNTRY=JAPAN MONTH=NOV NAFO=2J UNITAREA=206

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
204	BL DOGFISH	0.034	3	457	0.01	9	0.00
205	SKATES	0.058	3	457	0.02	9	0.01
206	COD	0.240	1	320	0.24	4	0.06
207	R H GREN	0.066	3	457	0.02	9	0.01
208	N WOLFISH	0.270	3	457	0.09	9	0.03
209	ST WOLFISH	0.018	1	320	0.02	4	0.00
210	EELPOUTS	0.006	1	320	0.01	4	0.00
211	REDFISHUNSP	1.755	3	457	0.58	9	0.19
212	LUMPFISH	0.005	1	320	0.00	4	0.00
213	PLAICE	0.005	1	320	0.00	4	0.00
214	WITCH	0.010	1	470	0.01	4	0.00
215	TURBOT	0.810	3	457	0.27	9	0.09
216	HALIBUT	0.026	1	320	0.03	4	0.01
UNITAREA		3.303					

TABLE 1b-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1984, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=JAPAN MONTH=NOV NAFO=2J UNITAREA=207

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
217	SKATES	4.470	26	532	0.17	98.0	0.05
218	COD	2.345	23	528	0.10	90.1	0.03
219	ROCKLINGTHB	0.011	3	538	0.00	15.1	0.00
220	R H GREY	1.875	23	528	0.08	83.4	0.02
221	N WOLFISH	10.685	25	532	0.43	92.7	0.12
222	SP WOLFISH	0.030	2	570	0.01	4.0	0.01
223	EELPOUTS	0.025	3	480	0.01	11.7	0.00
224	REDFISHUNSP	0.063	9	543	0.01	39.3	0.00
225	SCULPINS	0.057	11	553	0.01	44.1	0.00
226	PLAICE	0.750	16	529	0.05	63.0	0.01
227	ITCH	0.915	18	541	0.05	71.3	0.01
228	TURBOT	111.256	28	533	3.97	101.7	1.09
229	HALIBUT	0.008	1	450	0.01	4.2	0.00
230	BOREALIS SHRIMP	0.020	6	522	0.00	26.4	0.00
231	SNOW CRAB	2.390	24	530	0.10	92.1	0.03
UNITAREA		134.900					

DIRECT=TURBOT COUNTRY=JAPAN MONTH=NOV NAFO=2J UNITAREA=210

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
232	SKATES	7.315	53	515	0.14	225.7	0.03
233	COD	4.095	47	514	0.09	200.5	0.02
234	ROCKLINGTHB	0.039	3	525	0.01	13.8	0.00
235	R H GREN	1.715	23	516	0.07	88.6	0.02
236	RNGRENADIER	0.548	26	514	0.02	117.6	0.00
237	N WOLFISH	17.510	53	515	0.33	225.7	0.08
238	SP WOLFISH	0.050	1	525	0.05	3.5	0.01
239	EELPOUTS	0.043	6	528	0.01	26.1	0.00
240	REDFISHUNSP	0.102	12	502	0.01	47.3	0.00
241	SCULPINS	0.085	12	521	0.01	49.3	0.00
242	LUMPFISH	0.015	2	498	0.01	7.9	0.00
243	PLAICE	0.915	25	515	0.04	104.4	0.01
244	ITCH	3.715	42	514	0.09	183.4	0.02
245	TURBOT	266.375	58	514	4.59	248.4	1.07
246	BOREALIS SHRIMP	0.093	20	519	0.00	88.8	0.00
247	SNOW CRAB	2.948	46	517	0.06	197.0	0.01
UNITAREA		305.563					
NAFO		449.601					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1984. CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=JAPAN MONTH=NOV NAFO=3K UNITAREA=345

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
248	SKATES	0.01	1	308	0.01	1.0	0.01
249	COD	0.06	2	274	0.03	1.5	0.04
250	RNGRENADIER	0.02	2	274	0.01	1.5	0.01
251	REDFISHUNSP	26.00	2	274	13.00	1.5	17.33
252	WITCH	0.02	1	308	0.02	1.0	0.02
253	TURBOT	0.02	2	274	0.01	1.5	0.01
UNITAREA		26.13					

DIRECT=TURBOT COUNTRY=JAPAN MONTH=NOV NAFO=3K UNITAREA=347

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
254	SKATES	0.040	1	300	0.04	3	0.01
255	COD	0.100	1	300	0.10	3	0.03
256	RNGRENADIER	0.040	1	300	0.04	3	0.01
257	N WOLFISH	0.050	1	300	0.05	3	0.02
258	REDFISHUNSP	17.000	1	300	17.00	3	5.67
259	WITCH	0.010	1	300	0.01	3	0.00
260	TURBOT	0.030	1	300	0.03	3	0.01
UNITAREA		17.270					
NAFO		43.400					
MONTH		493.001					

DIRECT=TURBOT COUNTRY=JAPAN MONTH=DEC NAFO=2J UNITAREA=206

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
261	SKATES	0.470	5	490	0.09	17.0	0.03
262	COD	0.050	1	385	0.05	1.5	0.03
263	R H GREN	2.720	6	493	0.45	20.6	0.13
264	N WOLFISH	3.905	6	493	0.65	20.6	0.19
265	ST WOLFISH	0.020	1	510	0.02	3.6	0.01
266	SP WOLFISH	0.050	2	515	0.02	7.5	0.01
267	EELPOUTS	0.015	1	580	0.01	4.0	0.00
268	REDFISHUNSP	7.310	7	491	1.04	25.1	0.29
269	SCULPINS	0.010	1	580	0.01	4.0	0.00
270	LUMPFISH	0.060	3	437	0.02	9.5	0.01
271	PLAICE	0.320	2	535	0.16	7.1	0.05
272	WITCH	0.850	5	515	0.17	19.1	0.04
273	TURBOT	10.055	7	491	1.44	25.1	0.40
274	HALIBUT	0.065	2	545	0.03	7.6	0.01
UNITAREA		25.900					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1984, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=JAPAN MONTH=DEC NAFO=2J UNITAREA=207

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
275	SKATES	0.645	3	515	0.21	13.9	0.05
276	COD	0.440	3	515	0.15	13.9	0.03
277	ROCKLINGTHB	0.010	1	570	0.01	4.0	0.00
278	R H GREN	0.150	2	493	0.07	9.3	0.02
279	N WOLFISH	1.875	3	515	0.62	13.9	0.13
280	REDFISHUNSP	0.020	1	560	0.02	4.6	0.00
281	PLAICE	0.230	2	565	0.11	8.6	0.03
282	WITCH	0.090	1	560	0.09	4.6	0.02
283	TURBOT	31.595	5	524	6.32	22.4	1.41
284	BOREALIS SHRIMP	0.005	1	550	0.00	4.5	0.00
285	SNOW CRAB	0.435	3	515	0.14	13.9	0.03
UNITAREA		35.495					

DIRECT=TURBOT COUNTRY=JAPAN MONTH=DEC NAFO=2J UNITAREA=210

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
286	SKATES	1.640	7	530	0.23	30.0	0.05
287	COD	1.440	7	530	0.21	30.0	0.05
288	ROCKLINGTHB	0.005	1	550	0.00	4.0	0.00
289	R H GREN	0.125	2	545	0.06	9.0	0.01
290	N WOLFISH	3.710	7	530	0.53	30.0	0.12
291	EELPOUTS	0.015	2	545	0.01	8.2	0.00
292	REDFISHUNSP	0.010	1	550	0.01	4.8	0.00
293	SCULPINS	0.015	3	547	0.00	13.0	0.00
294	PLAICE	0.880	6	538	0.15	25.8	0.03
295	WITCH	0.455	5	536	0.09	21.0	0.02
296	TURBOT	38.995	7	530	5.57	30.0	1.30
297	BOREALIS SHRIMP	0.020	4	536	0.00	17.3	0.00
298	SNOW CRAB	0.690	6	528	0.11	25.0	0.03
UNITAREA		48.000					
NAFO		109.395					
MONTH		109.395					
COUNTRY		941.275					

DIRECT=TURBOT COUNTRY=POLAND MONTH=MAY NAFO=3K UNITAREA=339

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
299	TH SKATE	0.250	4	503	0.06	22	0.01
300	COD	0.275	3	500	0.09	16	0.02
301	N WOLFISH	0.135	3	500	0.04	16	0.01
302	SP WOLFISH	0.025	1	500	0.02	6	0.00
303	EELPOUTS	0.065	2	505	0.03	12	0.01
304	REDFISHUNSP	0.075	2	510	0.04	10	0.01
305	PLAICE	0.775	4	503	0.19	22	0.04
306	WITCH	2.350	4	503	0.59	22	0.11
307	TURBOT	22.500	4	503	5.63	22	1.02
308	HALIBUT	0.050	1	490	0.05	6	0.01

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1984, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES
b

DIRECT=TURBOT COUNTRY=POLAND MONTH=MAY NAFO=3K UNITAREA=339

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
UNITAREA		26.5					

DIRECT=TURBOT COUNTRY=POLAND MONTH=MAY NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
309	TH SKATE	1.300	17	494	0.08	108.5	0.01
310	COD	4.150	16	497	0.26	103.0	0.04
311	R H GREN	0.530	14	493	0.04	88.0	0.01
312	N WOLFISH	0.775	11	499	0.07	72.0	0.01
313	SP WOLFISH	0.200	7	495	0.03	44.0	0.00
314	EELPOUTS	0.175	4	495	0.04	25.7	0.01
315	REDFISHUNSP	0.635	16	495	0.04	100.5	0.01
316	PLAICE	1.685	19	495	0.09	121.0	0.01
317	WITCH	15.950	19	495	0.84	121.0	0.13
318	TURBOT	144.500	19	495	7.61	121.0	1.19
319	HALIBUT	0.275	8	499	0.03	51.5	0.01
UNITAREA		170.175					

DIRECT=TURBOT COUNTRY=POLAND MONTH=MAY NAFO=3K UNITAREA=345

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
320	TH SKATE	0.100	1	470	0.10	6	0.02
321	COD	0.200	1	470	0.20	6	0.03
322	R H GREN	0.025	1	470	0.02	6	0.00
323	SP WOLFISH	0.025	1	470	0.02	6	0.00
324	REDFISHUNSP	0.050	1	470	0.05	6	0.01
325	PLAICE	0.100	1	470	0.10	6	0.02
326	WITCH	1.000	1	470	1.00	6	0.17
327	TURBOT	10.000	1	470	10.00	6	1.67
UNITAREA		11.500					
NAFO		208.175					
MONTH		208.175					

DIRECT=TURBOT COUNTRY=POLAND MONTH=JUNE NAFO=3K UNITAREA=339

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
328	TH SKATE	2.300	10	446	0.23	47.2	0.05
329	COD	3.900	10	444	0.39	47.2	0.08
330	N WOLFISH	0.720	8	438	0.09	38.3	0.02
331	SP WOLFISH	0.580	7	443	0.08	33.0	0.02
332	PLAICE	0.727	8	439	0.09	38.3	0.02
333	WITCH	3.902	10	444	0.39	47.2	0.08
334	TURBOT	32.911	10	444	3.29	47.2	0.70
335	HALIBUT	0.020	1	480	0.02	4.0	0.00
UNITAREA		45.060					

TABLE 1b-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1984, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=POLAND MONTH=JUNE NAFO=3K UNITAREA=344

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
336	TH SKATE	0.550	2	430	0.27	7	0.08
337	COD	0.220	2	430	0.11	7	0.03
338	MARINUS	4.036	1	360	4.04	2	2.02
339	PLAICE	0.154	2	430	0.08	7	0.02
340	WITCH	0.887	2	430	0.44	7	0.13
341	TURBOT	9.677	2	430	4.84	7	1.38
UNITAREA		15.524					

DIRECT=TURBOT COUNTRY=POLAND MONTH=JUNE NAFO=3K UNITAREA=347

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
342	TH SKATE	0.300	1	470	0.30	5	0.06
343	COD	0.200	1	470	0.20	5	0.04
344	N WOLFISH	0.100	1	470	0.10	5	0.02
345	SP WOLFISH	0.100	1	470	0.10	5	0.02
346	PLAICE	0.120	1	470	0.12	5	0.02
347	WITCH	0.461	1	470	0.46	5	0.09
348	TURBOT	3.202	1	470	3.20	5	0.64
349	HALIBUT	0.020	1	470	0.02	5	0.00
UNITAREA		4.503					
NAFO		65.087					
MONTH		65.087					

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2G UNITAREA=

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
350	TURBOT	0.4	1	570	0.40	3	0.13

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2H UNITAREA=21

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
351	SKATES	0.265	9	548	0.03	38.7	0.01
352	COD	0.005	1	525	0.00	5.0	0.00
353	R H GREN	0.085	9	535	0.01	38.7	0.00
354	N WOLFISH	0.245	9	549	0.03	37.5	0.01
355	REDFISHUNSP	0.015	3	535	0.00	10.5	0.00
356	PLAICE	1.640	9	544	0.18	35.5	0.05
357	TURBOT	19.300	11	547	1.75	44.5	0.43
358	HALIBUT	0.010	1	550	0.01	2.0	0.00
UNITAREA		21.565					

TABLE 1b-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1984, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2H UNITAREA=213

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
359	SKATES	0.110	10	585	0.01	37.1	0.00
360	TAPIRFISH	0.010	1	500	0.01	3.0	0.00
361	COD	1.505	3	377	0.50	10.9	0.14
362	R H GREN	1.155	10	594	0.12	38.4	0.03
363	N WOLFISH	0.095	8	561	0.01	29.1	0.00
364	REDFISHUNSP	0.215	5	586	0.04	17.6	0.01
365	TURBOT	15.765	12	567	1.31	47.0	0.34
UNITAREA		18.855					

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2H UNITAREA=215

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
366	SKATES	0.045	6	490	0.01	26.1	0.00
367	COD	0.035	3	500	0.01	8.1	0.00
368	R H GREN	0.065	6	527	0.01	25.0	0.00
369	N WOLFISH	0.200	6	490	0.03	26.1	0.01
370	REDFISHUNSP	0.015	3	513	0.00	13.0	0.00
371	PLAICE	1.850	7	503	0.26	28.1	0.07
372	TURBOT	14.970	7	503	2.14	28.1	0.53
373	HALIBUT	0.020	1	560	0.02	3.0	0.01
UNITAREA		17.200					

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2H UNITAREA=216

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
374	R H GREN	0.02	1	580	0.02	3	0.01
375	N WOLFISH	0.01	1	580	0.01	3	0.00
376	TURBOT	0.95	1	580	0.95	3	0.32
UNITAREA		0.98					
NAFO		58.60					
MONTH		59.00					

DIRECT=TURBOT COUNTRY=POLAND MONTH=DEC NAFO=2H UNITAREA=212

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
377	GL SHARK	2.000	3	587	0.67	12.0	0.17
378	SKATES	0.200	10	659	0.01	75.4	0.00
379	COD	0.810	2	530	0.40	9.4	0.09
380	R H GREN	0.165	17	564	0.01	67.3	0.00
381	N WOLFISH	1.765	18	560	0.10	71.4	0.02
382	REDFISHUNSP	0.045	9	548	0.00	35.3	0.00
383	PLAICE	9.370	20	562	0.47	79.4	0.12
384	TURBOT	119.150	20	562	5.96	79.4	1.50
385	HALIBUT	0.035	2	545	0.02	5.9	0.01

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY, 1984. CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

b

DIRECT=TURBOT COUNTRY=POLAND MONTH=DEC NAFO=2H UNITAREA=212

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
UNITAREA		133.54					

DIRECT=TURBOT COUNTRY=POLAND MONTH=DEC NAFO=2H UNITAREA=213

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
386	SKATES	0.015	3	530	0.00	8.9	0.00
387	R H GREN	0.025	3	530	0.01	8.9	0.00
388	N WOLFISH	0.020	3	510	0.01	7.9	0.00
389	PLAICE	0.350	2	525	0.17	6.0	0.06
390	TURBOT	4.620	4	523	1.15	10.9	0.42
UNITAREA		5.030					

DIRECT=TURBOT COUNTRY=POLAND MONTH=DEC NAFO=2H UNITAREA=215

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
391	SKATES	0.115	11	572	0.01	40.5	0.00
392	R H GREN	0.090	11	567	0.01	42.1	0.00
393	N WOLFISH	1.000	11	566	0.09	41.0	0.02
394	REDFISHUNSP	0.020	3	557	0.01	12.1	0.00
395	PLAICE	5.220	13	570	0.40	49.5	0.11
396	TURBOT	46.670	13	570	3.59	49.5	0.94
397	HALIBUT	0.020	1	580	0.02	4.1	0.00
UNITAREA		53.135					

DIRECT=TURBOT COUNTRY=POLAND MONTH=DEC NAFO=2H UNITAREA=216

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
398	SKATES	0.050	4	585	0.01	15.2	0.00
399	R H GREN	0.030	3	580	0.01	11.1	0.00
400	N WOLFISH	0.525	4	585	0.13	15.2	0.03
401	REDFISHUNSP	0.025	4	585	0.01	15.2	0.00
402	PLAICE	0.790	4	585	0.20	15.2	0.05
403	TURBOT	45.450	4	585	11.36	15.2	2.99
UNITAREA		46.870					
NAFO		238.575					
MONTH		238.575					
COUNTRY		570.837					

TABLE 1-SUMMARY OF THE OBSERVED OTTER TRAWL TURBOT FISHERY,1984, CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

b

DIRECT=TURBOT COUNTRY=PORTUGAL MONTH=DEC NAFO=3L UNITAREA=330

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	NHRS	C_HR
404	SKATES	0.65	5	272	0.13	14.0	0.05
405	COD	21.00	5	272	4.20	14.0	1.50
406	N WOLFISH	0.86	5	272	0.17	14.0	0.06
407	ST. WOLFISH	0.01	1	259	0.01	2.5	0.00
408	SP WOLFISH	0.75	5	272	0.15	14.0	0.05
409	REDFISHUNSP	0.32	5	272	0.06	14.0	0.02
410	LUMPFISHES	0.00	1	274	0.00	3.1	0.00
411	PLAICE	0.47	5	272	0.09	14.0	0.03
412	WITCH	0.02	1	274	0.02	2.5	0.01
413	TURBOT	0.10	4	271	0.02	10.9	0.01
414	HALIBUT	0.02	1	276	0.02	3.1	0.01
UNITAREA		24.23					
NAFO		24.23					
MONTH		24.23					
COUNTRY		24.23					
DIRECT		2185.95					
		2185.95					

TABLE 1-SUMMARY OF THE OBSERVED GILLNET TURBOT FISHERY,1983. CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

C

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2J UNITAREA=202

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	TOTNETS	C_NET
1	SKATES	0.135	10	300	0.01	1900	0.000
2	COD	67.050	33	310	2.03	7380	0.009
3	R H GREN	1.905	15	300	0.13	3200	0.001
4	RNGRENADIER	3.615	16	321	0.23	3080	0.001
5	N WOLFISH	0.465	16	300	0.03	3300	0.000
6	SP WOLFISH	0.790	14	300	0.06	3050	0.000
7	REDFISHUNSP	0.060	5	311	0.01	1350	0.000
8	LUMPFISH	0.005	1	300	0.00	200	0.000
9	PLAICE	1.690	22	305	0.08	4800	0.000
10	WITCH	0.060	3	300	0.02	700	0.000
11	TURBOT	601.700	33	310	18.23	7380	0.082
12	HALIBUT	0.035	3	318	0.01	750	0.000
13	CANCERNS	0.370	15	321	0.02	3480	0.000
14	SNOW CRAB	0.145	13	300	0.01	2800	0.000
UNITAREA		678.025					
NAFO		678.025					
MONTH		678.025					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=OCT NAFO=2J UNITAREA=202

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	TOTNETS	C_NET
15	SKATES	3.97	37	305	0.11	10660	0.000
16	BLUE HAKE	3.25	1	310	3.25	150	0.022
17	COD	148.80	53	309	2.81	14485	0.010
18	R H GREN	10.46	16	318	0.65	3575	0.003
19	RNGRENADIER	11.25	37	305	0.30	11010	0.001
20	N WOLFISH	0.43	10	308	0.04	2200	0.000
21	SP WOLFISH	1.56	29	302	0.05	6510	0.000
22	REDFISHUNSP	2.15	42	307	0.05	12135	0.000
23	MENTELLA	0.00	1	310	0.00	300	0.000
24	PLAICE	1.60	33	304	0.05	7435	0.000
25	WITCH	0.04	4	300	0.01	680	0.000
26	TURBOT	986.19	54	309	18.26	14635	0.067
27	HALIBUT	0.54	16	302	0.03	3600	0.000
28	CANCERNS	0.30	6	316	0.05	1650	0.000
29	SNOW CRAB	6.20	44	308	0.14	12285	0.001
UNITAREA		1176.76					
NAFO		1176.76					
MONTH		1176.76					

TABLE 1-SUMMARY OF THE OBSERVED GILLNET TURBOT FISHERY,1983. CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

C

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=NOV NAFO=2J UNITAREA=202

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	TOTNETS	C_NET
30	SKATES	1.50	11	308	0.14	1875	0.001
31	COD	109.92	17	313	6.47	3050	0.035
32	R H GREN	2.50	9	324	0.28	1850	0.001
33	RNGRENADIER	3.45	8	300	0.43	1200	0.003
34	N WOLFISH	0.27	4	300	0.07	700	0.000
35	SP WOLFISH	0.70	8	300	0.09	1200	0.001
36	REDFISHUNSP	0.54	10	305	0.05	1650	0.000
37	PLAICE	0.38	8	300	0.05	1200	0.000
38	WITCH	0.04	2	300	0.02	400	0.000
39	TURBOT	243.35	17	313	14.31	3050	0.080
40	HALIBUT	0.21	7	300	0.03	1050	0.000
41	SNOW CRAB	1.24	14	311	0.09	2575	0.000
		364.10					
UNITAREA		364.10					
NAFO		364.10					
MONTH		2218.89					
COUNTRY		2218.89					
DIRECT		2218.89					

TABLE 1-SUMMARY OF THE OBSERVED GILLNET TURBOT FISHERY,1984. CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2J UNITAREA=202

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	TOTNETS	C_NET
1	SKATES	0.25	5	275	0.05	1300	0.000
2	COD	14.60	8	263	1.82	2300	0.006
3	RNGRENADIER	1.75	7	285	0.25	1900	0.001
4	N WOLFISH	0.10	3	242	0.03	1000	0.000
5	SP WOLFISH	0.25	5	275	0.05	1300	0.000
6	REDFISHUNSP	0.77	6	274	0.13	1670	0.000
7	PLAICE	1.86	7	285	0.27	1900	0.001
8	WITCH	1.65	9	268	0.18	2400	0.001
9	TURBOT	52.17	9	268	5.80	2400	0.022
10	CANCERNS	0.10	4	259	0.02	1100	0.000
UNITAREA		73.50					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2J UNITAREA=203

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	TOTNETS	C_NET
11	GL SHARK	1.000	1	340	1.00	450	0.002
12	SKATES	0.750	15	275	0.05	3550	0.000
13	COD	72.770	31	311	2.35	10200	0.007
14	R H GREN	1.800	3	327	0.60	1100	0.002
15	RNGRENADIER	6.050	18	287	0.34	4820	0.001
16	N WOLFISH	0.370	16	344	0.02	6650	0.000
17	SP WOLFISH	0.750	15	275	0.05	3550	0.000
18	REDFISHUNSP	10.840	29	309	0.37	9300	0.001
19	PLAICE	8.510	22	301	0.39	6650	0.001
20	WITCH	4.525	29	307	0.16	9850	0.000
21	TURBOT	68.600	31	311	2.21	10200	0.007
22	CANCERNS	0.500	16	344	0.03	6650	0.000
UNITAREA		176.465					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2J UNITAREA=204

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	TOTNETS	C_NET
23	COD	0.200	1	260	0.20	400	0.000
24	R H GREN	0.050	1	260	0.05	400	0.000
25	N WOLFISH	0.015	1	260	0.01	400	0.000
26	REDFISHUNSP	0.100	1	260	0.10	400	0.000
27	WITCH	0.140	1	260	0.14	400	0.000
28	TURBOT	1.300	1	260	1.30	400	0.003
29	CANCERNS	0.030	1	260	0.03	400	0.000
UNITAREA		1.845					
NAFO		251.800					
MONTH		251.800					

TABLE 1-SUMMARY OF THE OBSERVED GILLNET TURBOT FISHERY, 1984. CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2J UNITAREA=202

OBS	SPECIES		CATCHWT	N_SETS	AVGDEPTH	C_SET	TOTNETS	C_NET
30	SKATES	99	1.50	39	323	0.04	8395	0.000
31			0.05	1	310	0.05	130	0.000
32	COD		91.86	53	322	1.73	12535	0.007
33	WHITE HAKE		0.01	1	375	0.01	200	0.000
34	R H GREN		7.55	20	309	0.38	5250	0.001
35	RNGRENADIER		10.32	33	330	0.31	7205	0.001
36	N WOLFISH		0.06	5	323	0.01	1960	0.000
37	SP WOLFISH		0.48	13	284	0.04	3110	0.000
38	EELPOUTS		0.00	1	310	0.00	350	0.000
39	REDFISHUNSP		3.28	44	323	0.07	9475	0.000
40	PLAICE		4.05	43	314	0.09	11235	0.000
41	WITCH		0.49	18	290	0.03	5410	0.000
42	TURBOT		1218.06	53	322	22.98	12535	0.097
43	HALIBUT		0.05	7	306	0.01	1880	0.000
44	NEOLITHODES		0.71	18	363	0.04	2525	0.000
45		8203	0.60	2	310	0.30	250	0.002
46	CANCERNS		0.26	6	310	0.04	2710	0.000
47	SNOW CRAB		9.50	18	309	0.53	5000	0.002
UNITAREA			1348.86					
NAFO			1348.86					
MONTH			1348.86					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=OCT NAFO=2J UNITAREA=202

OBS	SPECIES		CATCHWT	N_SETS	AVGDEPTH	C_SET	TOTNETS	C_NET
48	SKATES	99	0.15	9	310	0.02	950	0.000
49	TH SKATE		0.70	14	361	0.05	2340	0.000
50			0.02	1	310	0.02	150	0.000
51	COD		131.44	45	333	2.92	6210	0.021
52	R H GREN		5.65	25	310	0.23	2920	0.002
53	RNGRENADIER		4.77	20	362	0.24	3290	0.001
54	N WOLFISH		0.01	1	310	0.01	125	0.000
55	SP WOLFISH		0.02	2	310	0.01	300	0.000
56	REDFISHUNSP		3.10	31	344	0.10	4440	0.001
57	SCULPIN		0.02	4	310	0.00	450	0.000
58	PLAICE		0.44	19	327	0.02	2490	0.000
59	WITCH		0.29	18	362	0.02	3040	0.000
60	TURBOT		938.68	45	333	20.86	6210	0.151
61	HALIBUT		0.18	13	331	0.01	1700	0.000
62		8203	2.70	15	310	0.18	1920	0.001
63	SNOW CRAB		2.36	30	345	0.08	4290	0.001
UNITAREA			1090.55					

TABLE 1-SUMMARY OF THE OBSERVED GILLNET TURBOT FISHERY,1984. CATCHES AND CATCH RATES RECORDED IN METRIC TONNES

d

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=OCT NAFO=2J UNITAREA=207

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	TOTNETS	C_NET
64	COD	7.50	2	310	3.75	280	0.027
65	R H GREN	0.50	2	310	0.25	280	0.002
66	REDFISHUNSP	0.02	1	310	0.02	150	0.000
67	PLAICE	0.10	2	310	0.05	280	0.000
68	TURBOT	55.32	2	310	27.66	280	0.198
69	8203	0.45	2	310	0.22	280	0.002
UNITAREA		63.89					
NAFO		1154.45					
MONTH		1154.45					

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=NOV NAFO=2J UNITAREA=202

OBS	SPECIES	CATCHWT	N_SETS	AVGDEPTH	C_SET	TOTNETS	C_NET
70	SKATES	0.14	10	304	0.01	1431	0.000
71	COD	58.70	12	299	4.89	1782	0.033
72	R H GREN	1.48	10	301	0.15	1582	0.001
73	N WOLFISH	0.01	1	310	0.01	175	0.000
74	SP WOLFISH	0.28	6	289	0.05	1082	0.000
75	REDFISHUNSP	0.25	6	308	0.04	771	0.000
76	MENTELLA	0.08	4	291	0.02	560	0.000
77	SCULPIN	0.02	4	310	0.00	425	0.000
78	PLAICE	0.13	11	298	0.01	1732	0.000
79	WITCH	0.00	1	310	0.00	125	0.000
80	TURBOT	112.15	12	299	9.35	1782	0.063
81	HALIBUT	0.04	3	307	0.01	405	0.000
82	SNOW CRAB	0.64	11	299	0.06	1632	0.000
UNITAREA		173.94					
NAFO		173.94					
MONTH		173.94					
COUNTRY		2929.05					
DIRECT		2929.05					
		2929.05					

Table 2. Principal by-catches in the 1983-84 Greenland halibut directed fisheries.

Unit area	Percentage[a]	Species
202[b]	Medium	Cod, witch
203	High	Cod, witch, redfish, plaice
204	Medium	Witch, plaice
206	Medium	Redfish, cod
207[b]	Medium	Cod
210[b]	Low	Cod
212[b]	Low	Cod
213	Low	Redfish
215[b]	Low	Plaice
216[b]	Low	Roundnose grenadier
334	Medium	Witch, plaice, redfish
339	Medium	Witch, plaice, cod
343	Medium	Cod, witch
344	High	Witch, cod, plaice
346	High	Redfish, witch
347	High	Redfish, witch

[a]Low refers to less than 20% total by-catch for all species combined, high about 40% or more.

[b]This symbol flags unit areas with high average catch rates.

Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JAN NAFO=3K UNITAREA=339

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

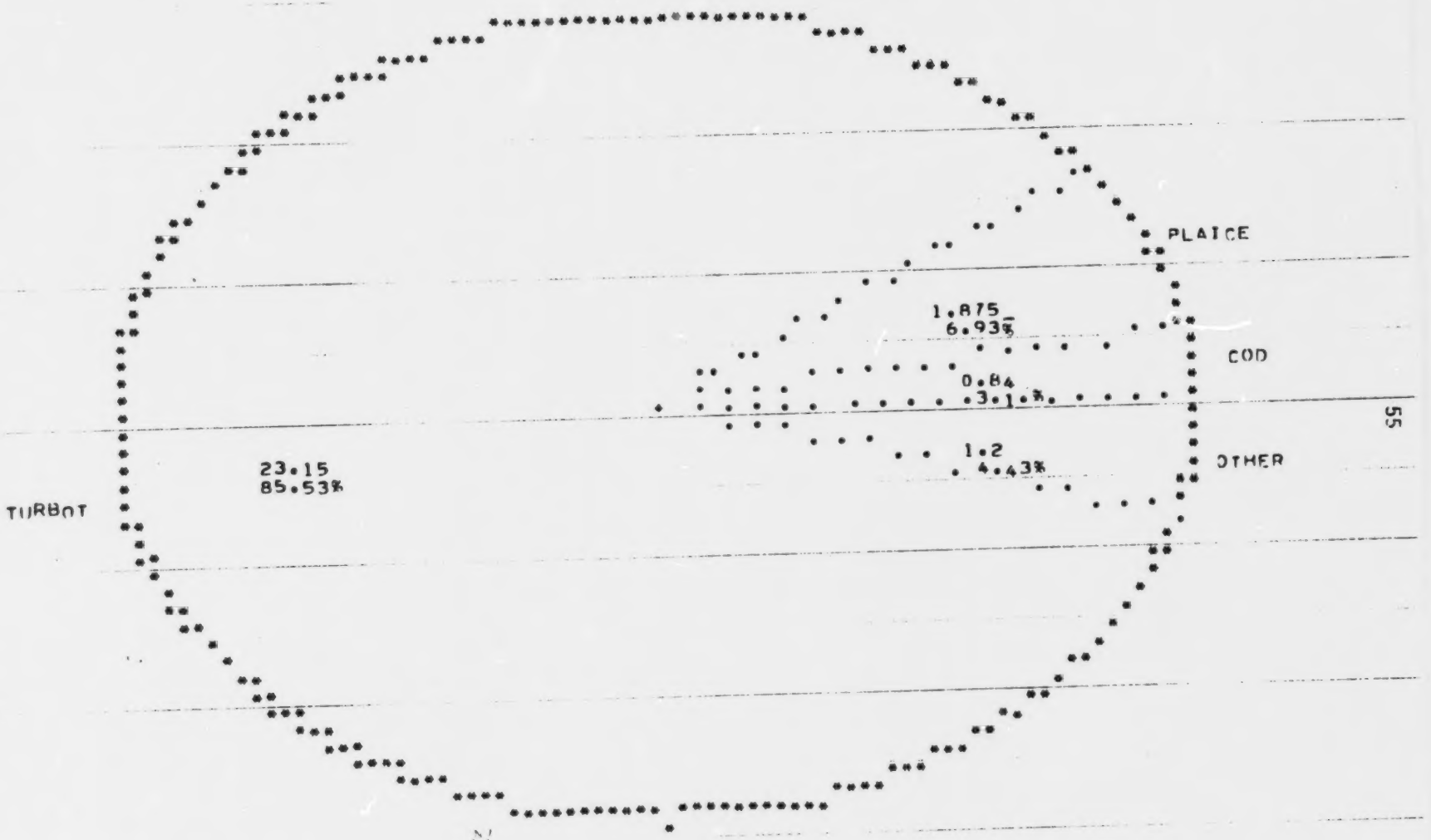


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JAN NAFO=3K UNITAREA=4A

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

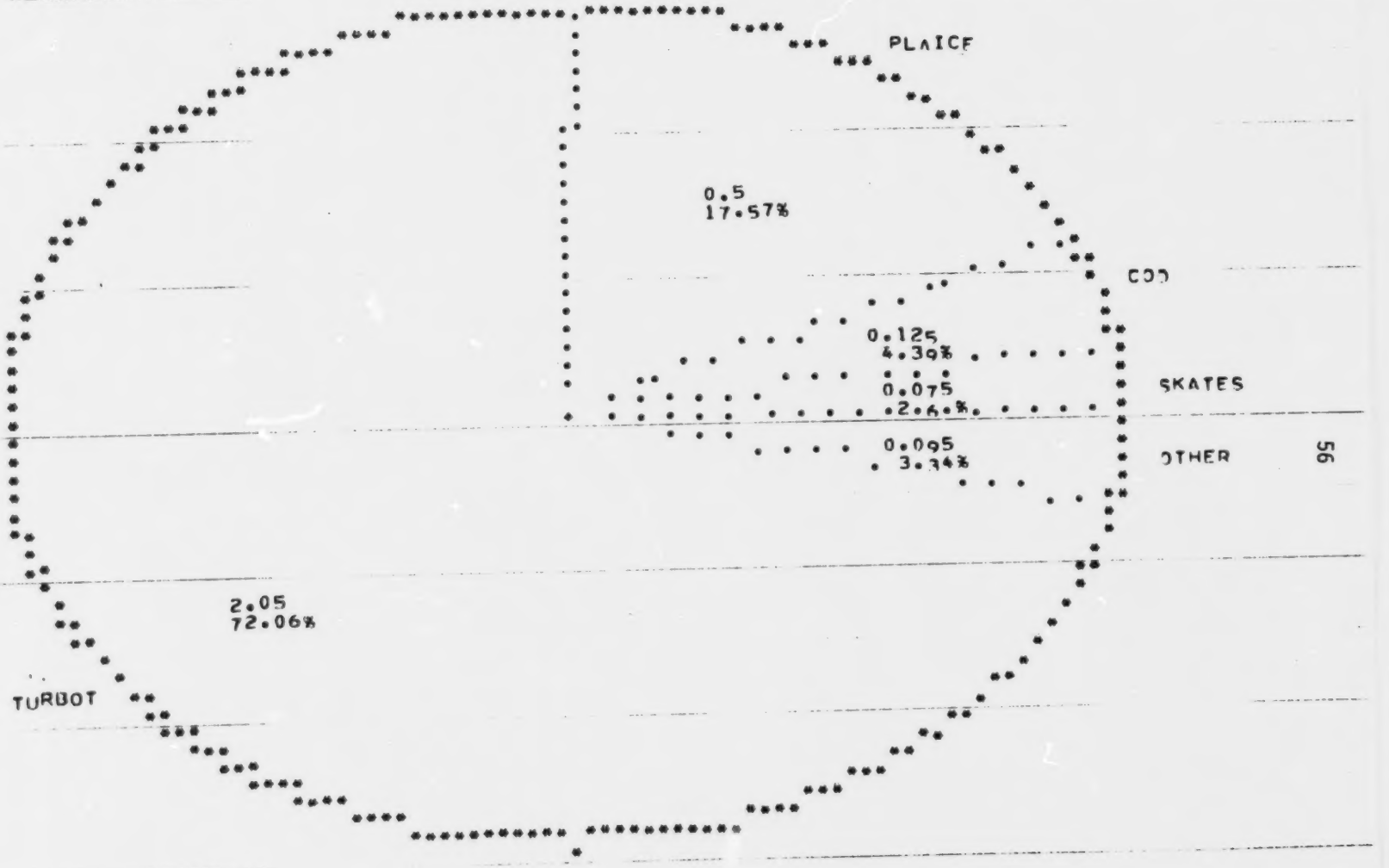


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=MAY NAFO=3K UNITAREA=339

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

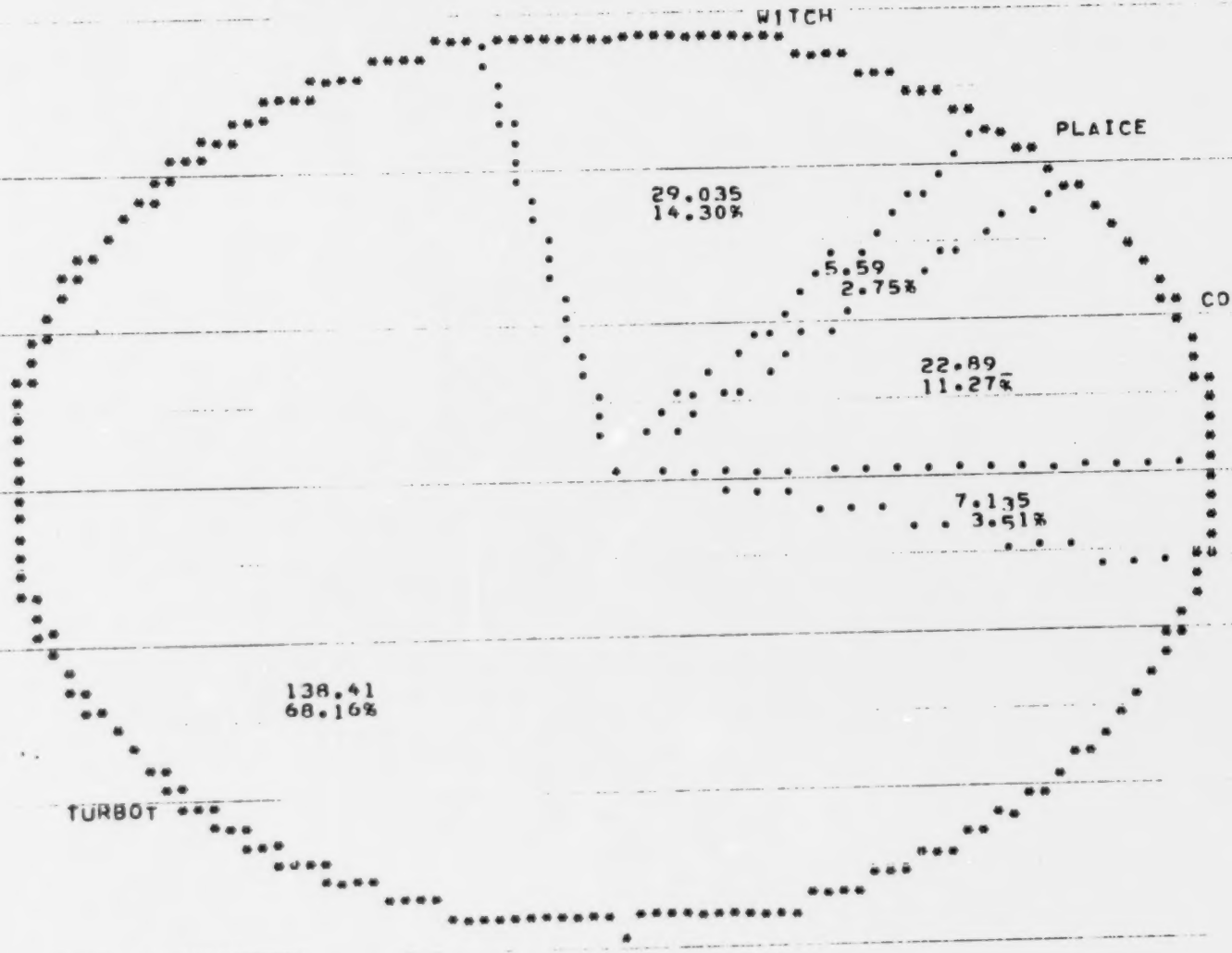


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=MAY NAFO=3K UNITAREA=344

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

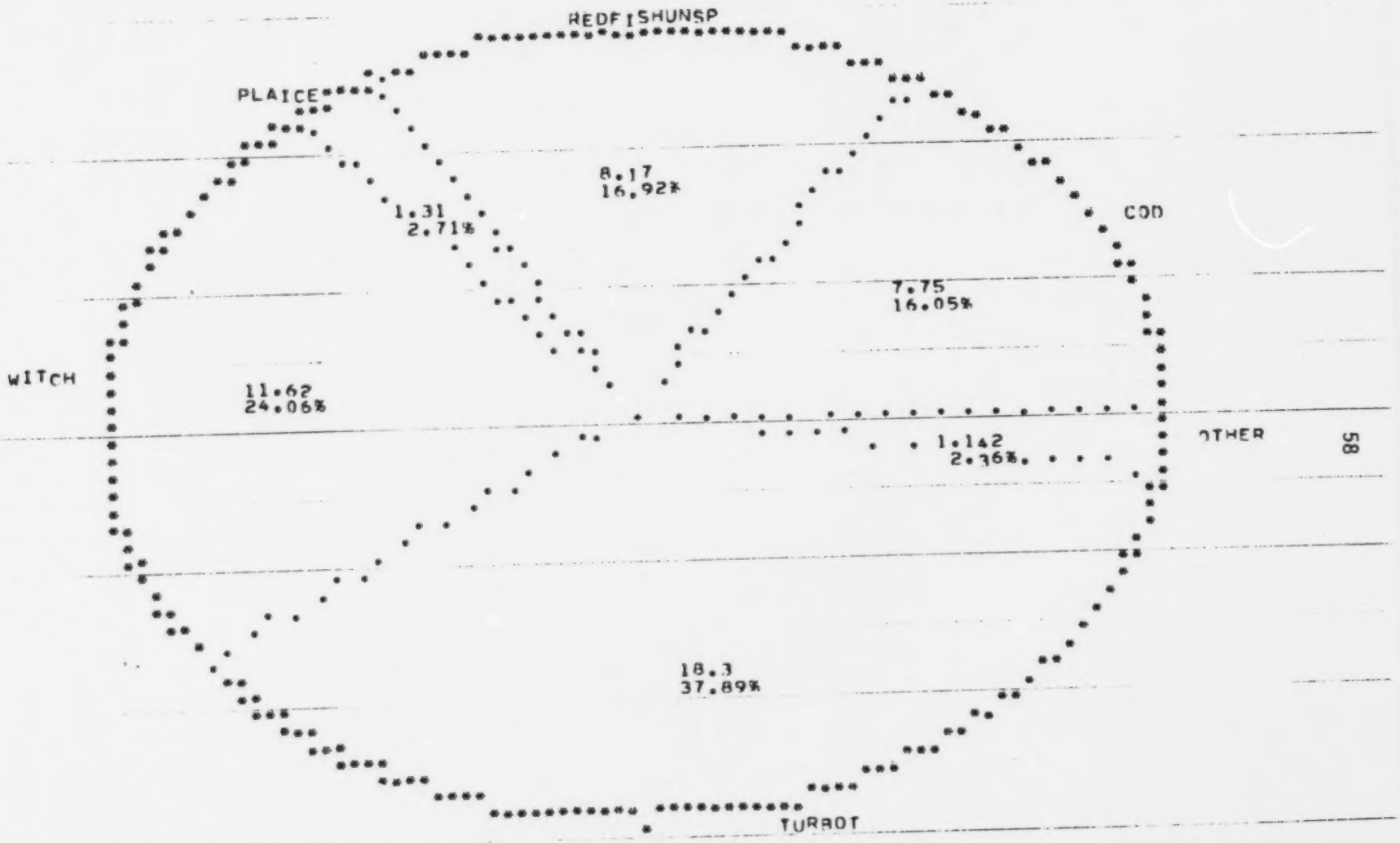


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JUNE NAFO=2J UNITAREA=203

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

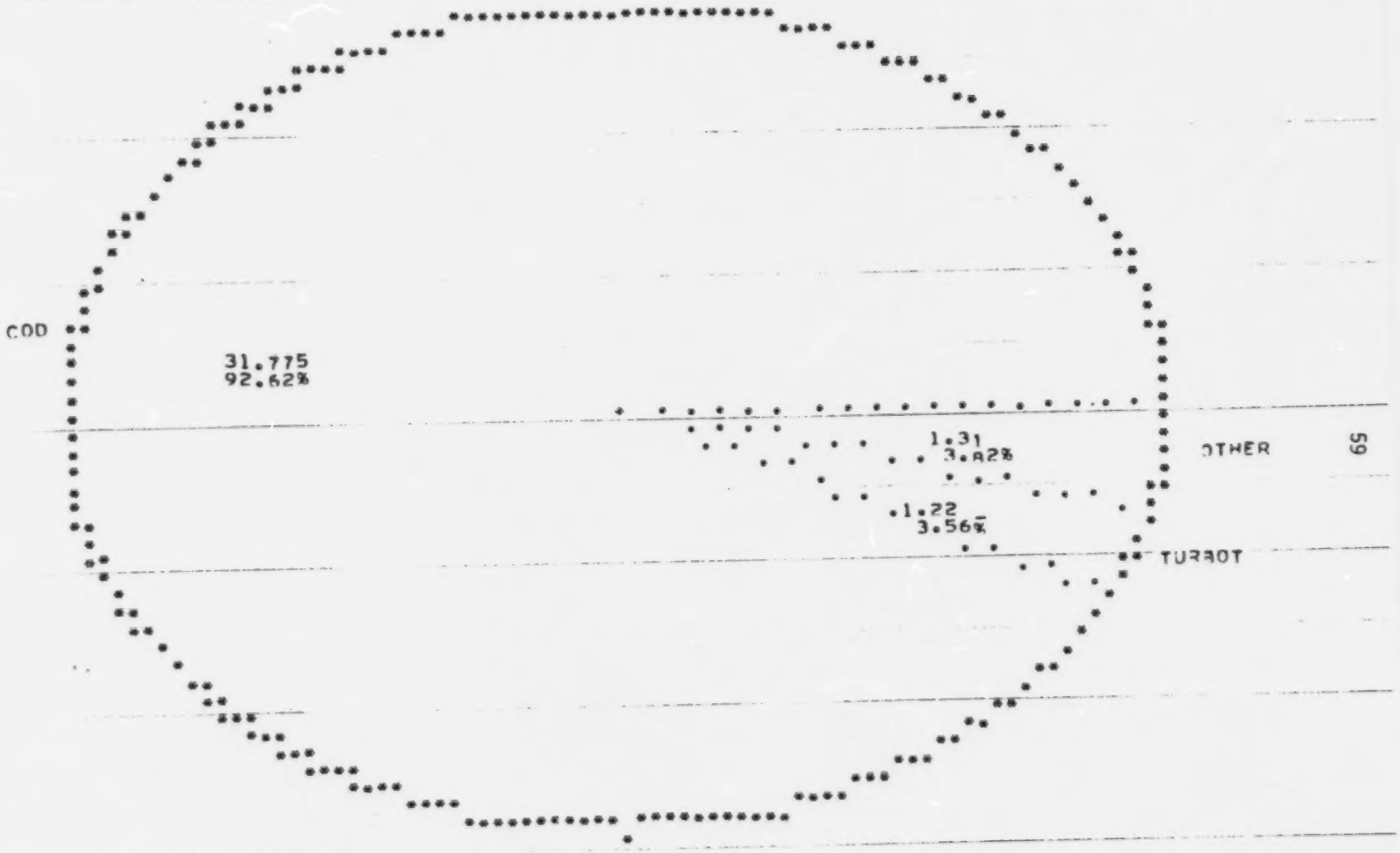


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JUNE NAFO=3K UNITAREA=339

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

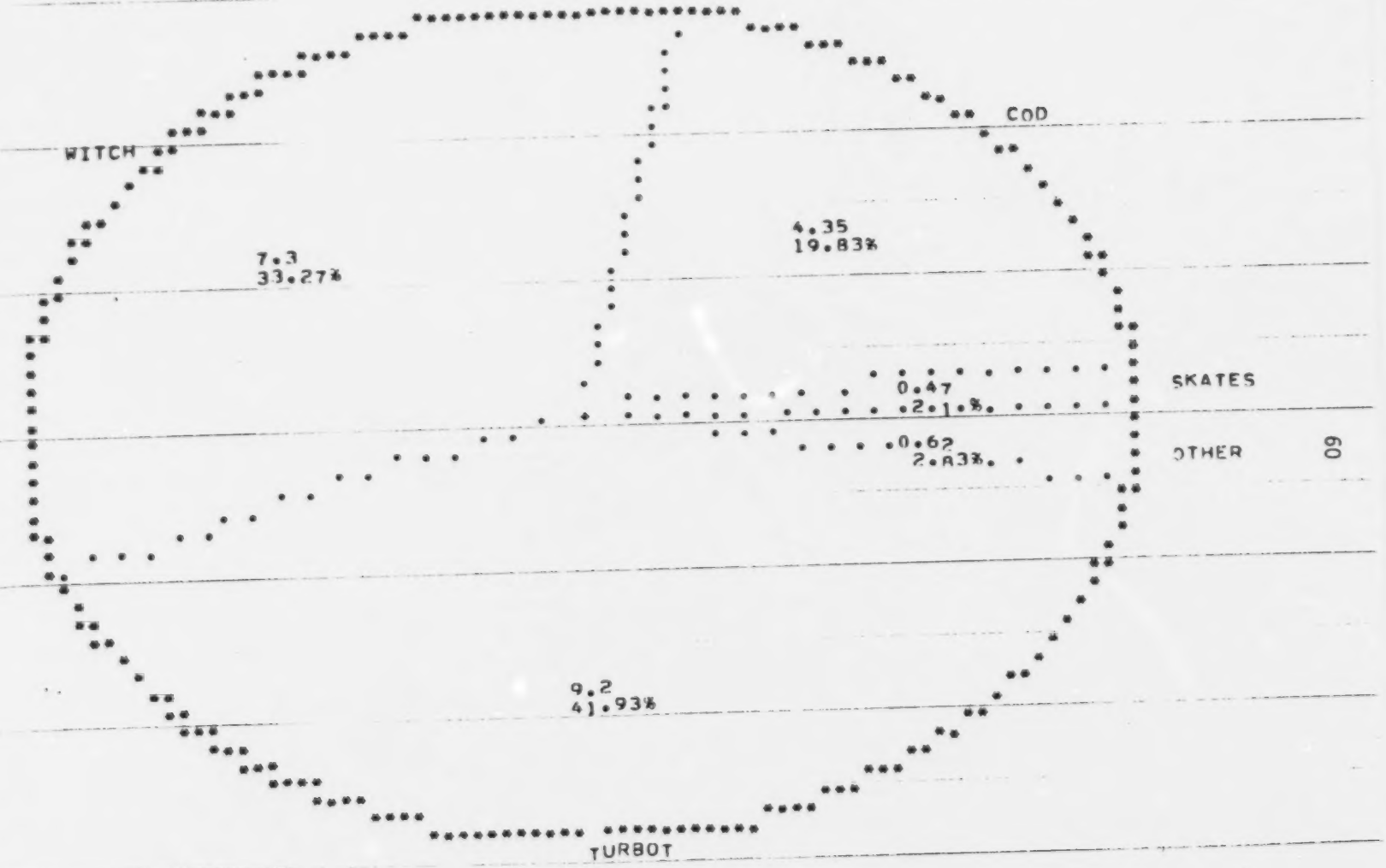


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JUNE NAFO=3K UNITAREA=343

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

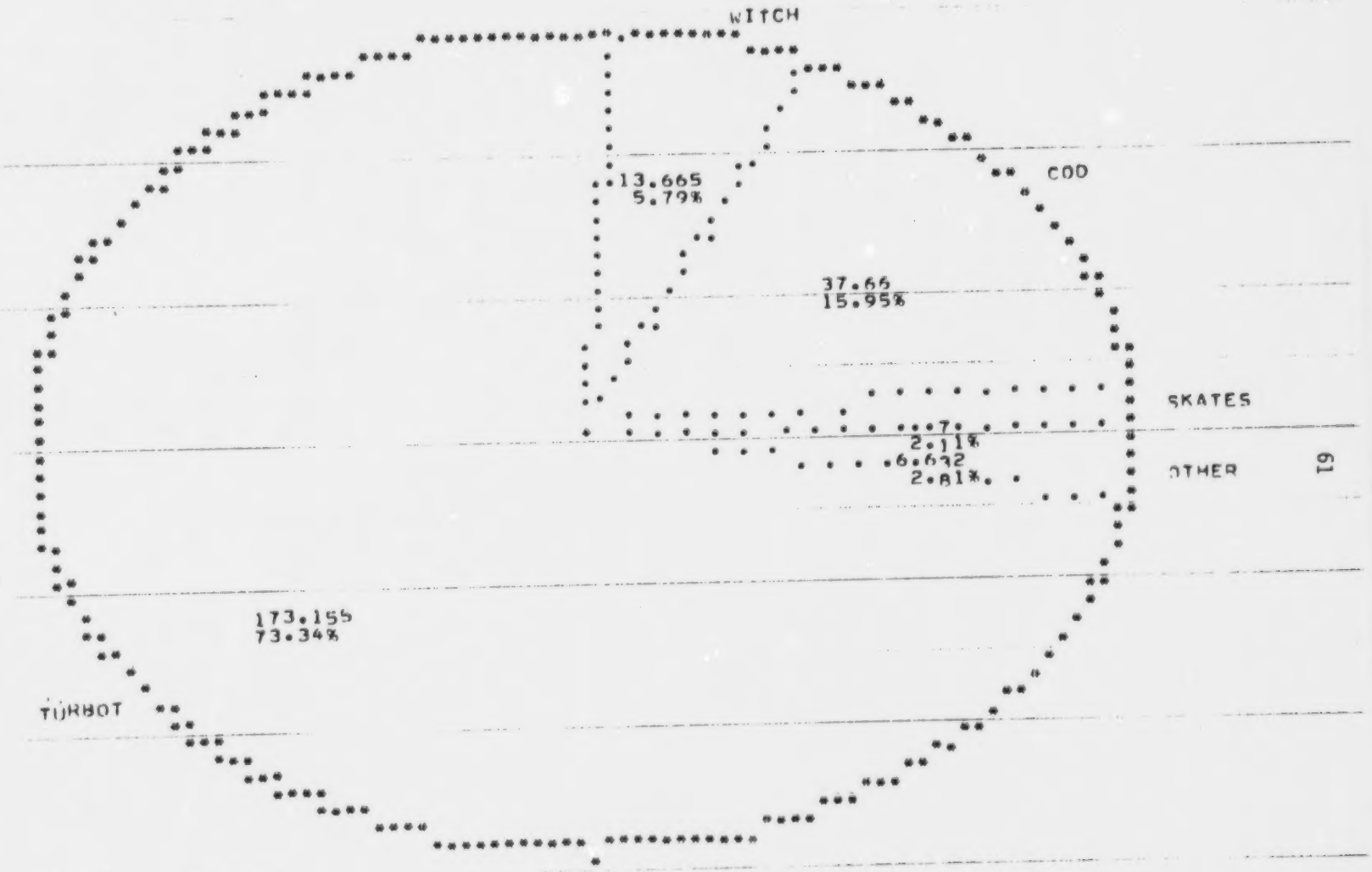


Fig. 1. SPECIES COMPOSITION.TURBOT FISHERY.1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=2H UNITAREA=212

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

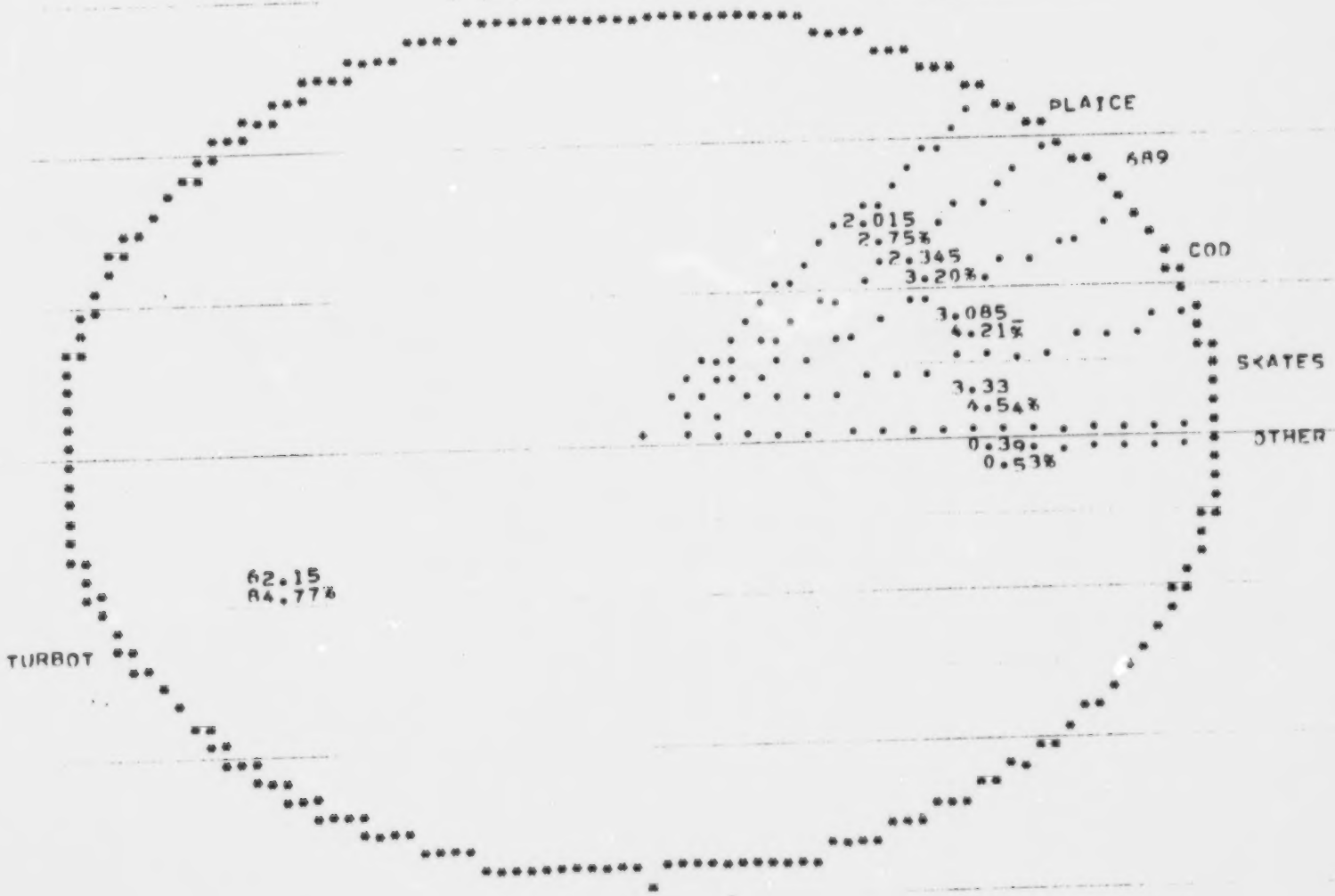


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=2H UNITAREA=215

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

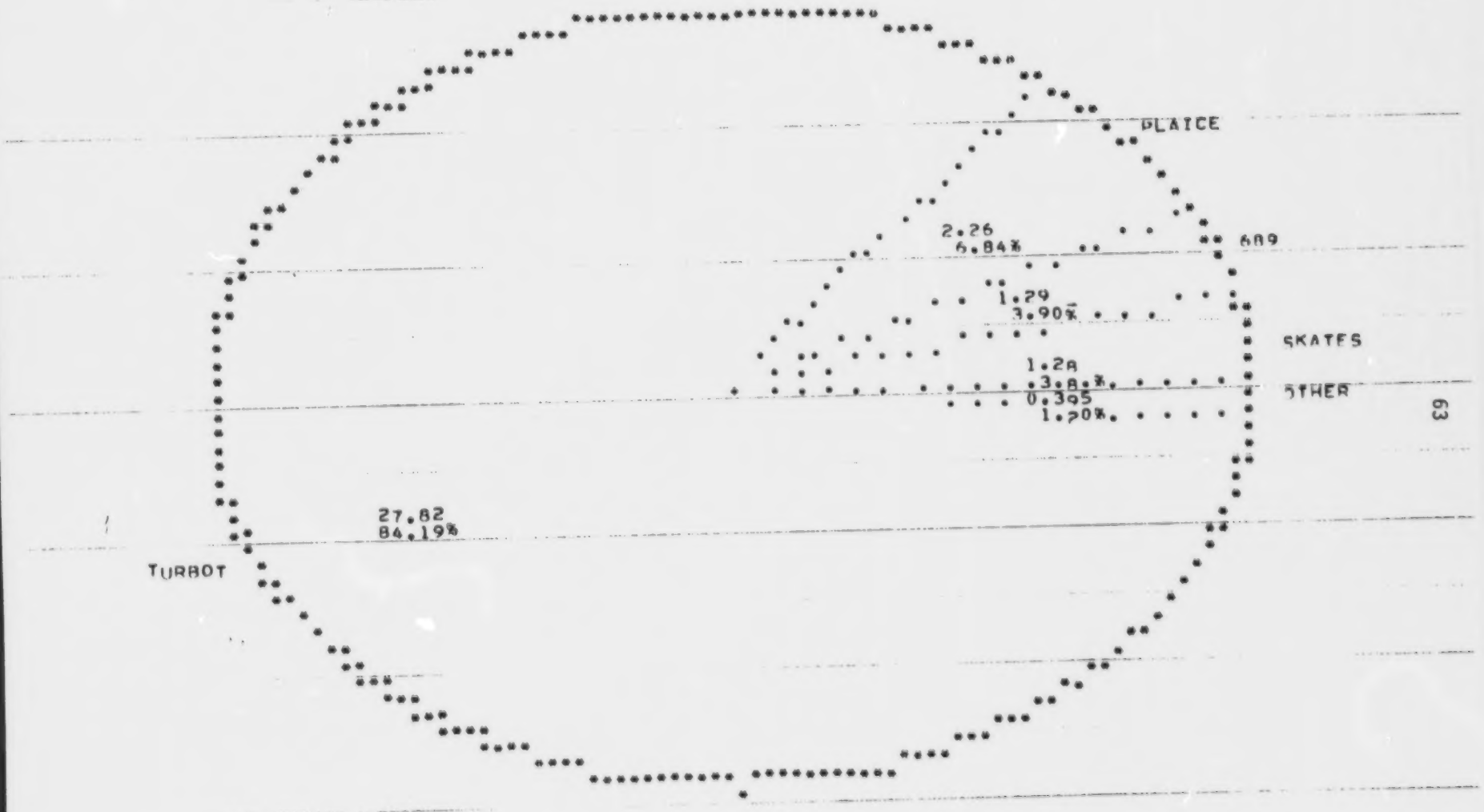


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983
DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=2J UNITAREA=203
SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

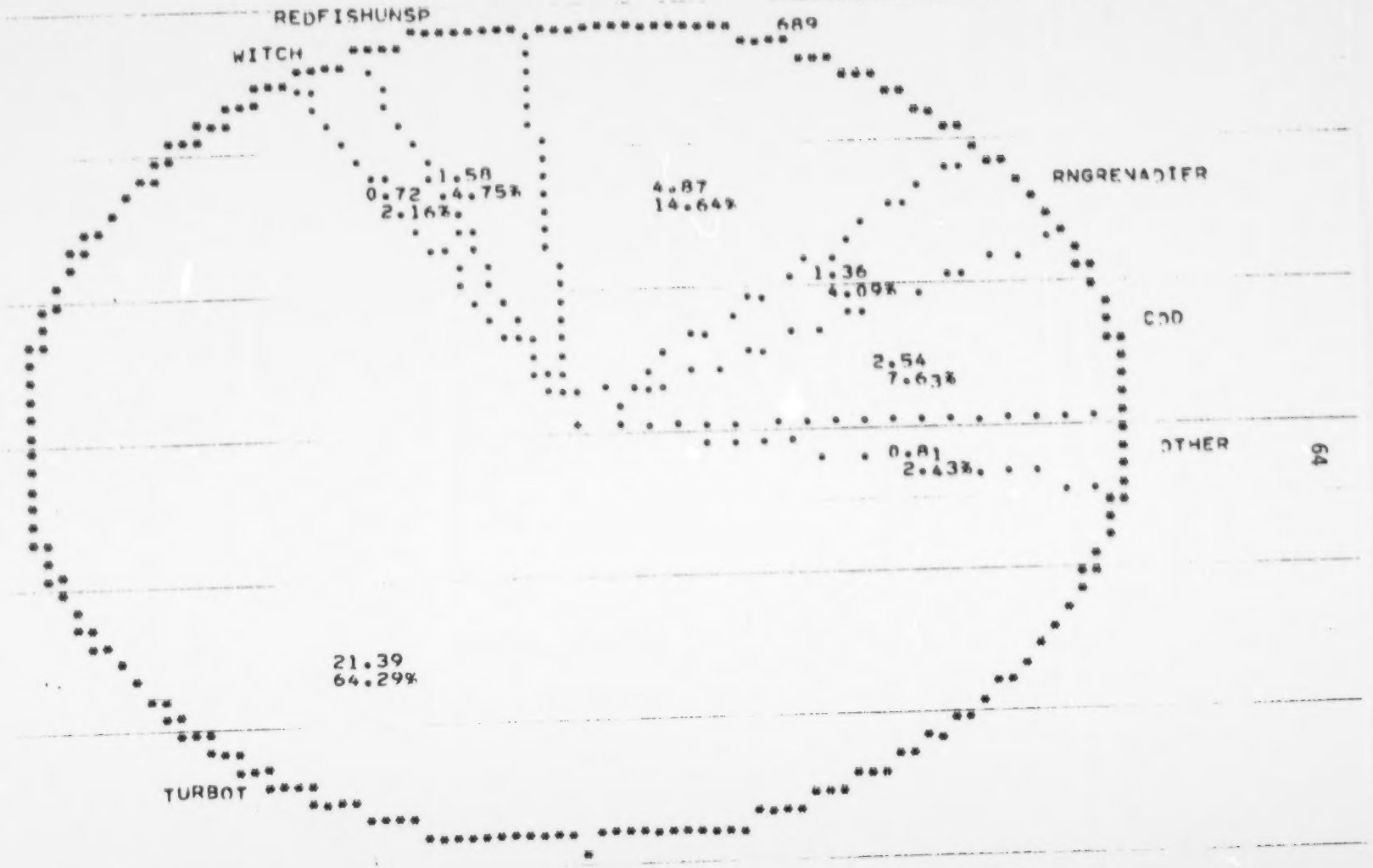
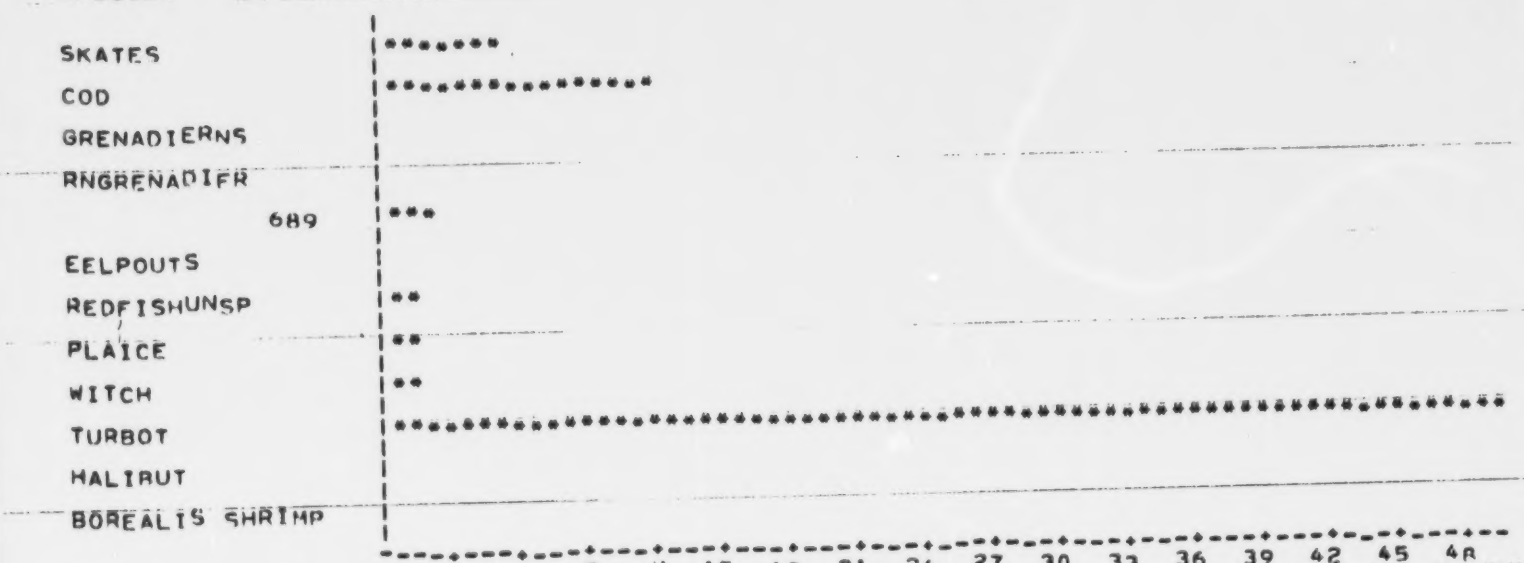


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=3K UNITAREA=343

BAR CHART OF SUMS



SPECIES	FREQ	CATCHWT SUM
SKATES	31	4.89000
COD	30	11.78100
GRENADIERNS	20	0.26800
RNGRENADIER	8	0.06000
689	37	1.91900
EELPOUTS	23	0.17100
REDFISHUNSP	20	1.44100
PLAICE	29	1.57300
WITCH	30	1.26100
TURBOT	31	49.59000
HALIBUT	5	0.04500
BOREALIS SHRIMP	12	0.01200

Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=3K UNITAREA=344

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

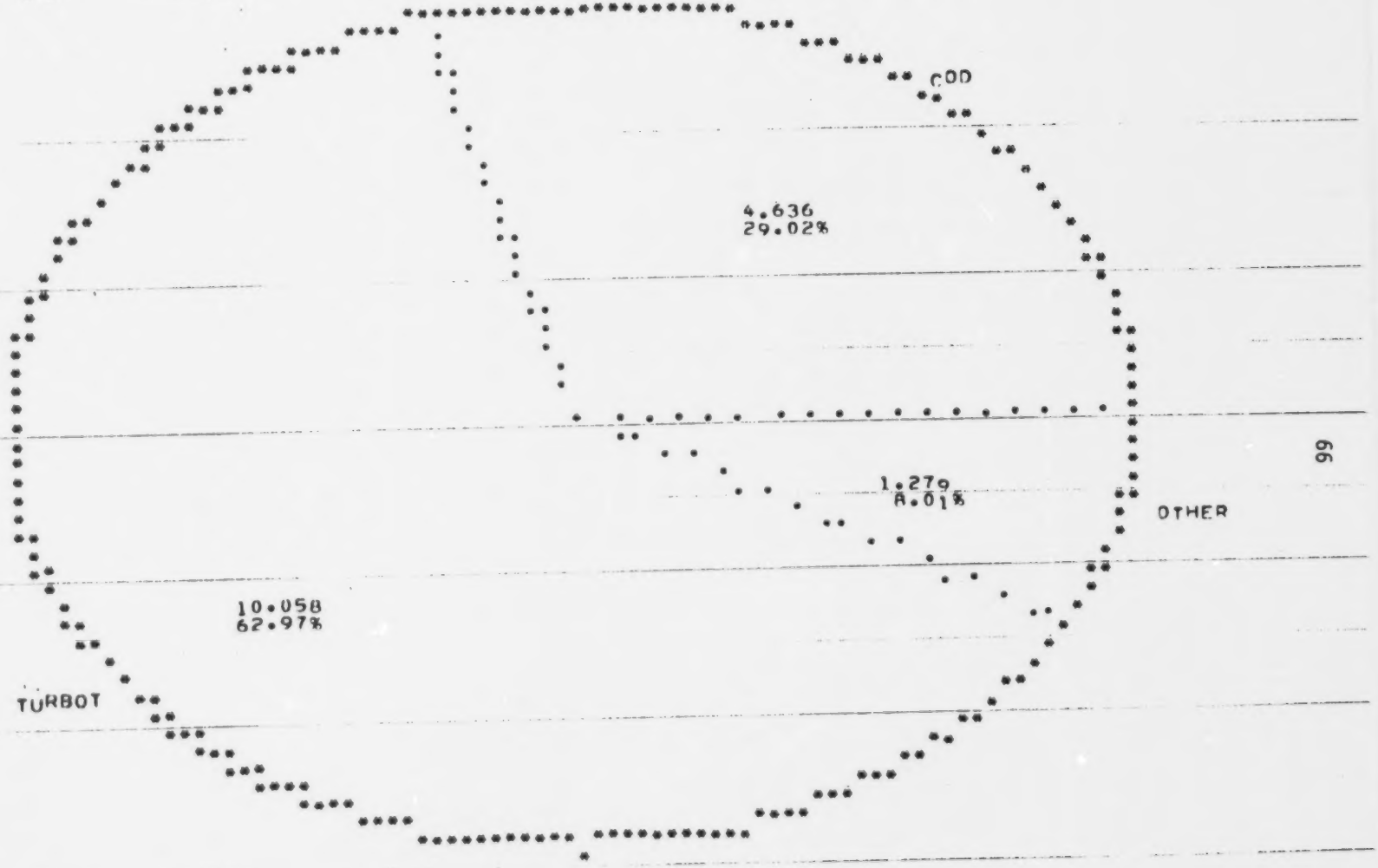


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2H UNITAREA=212

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

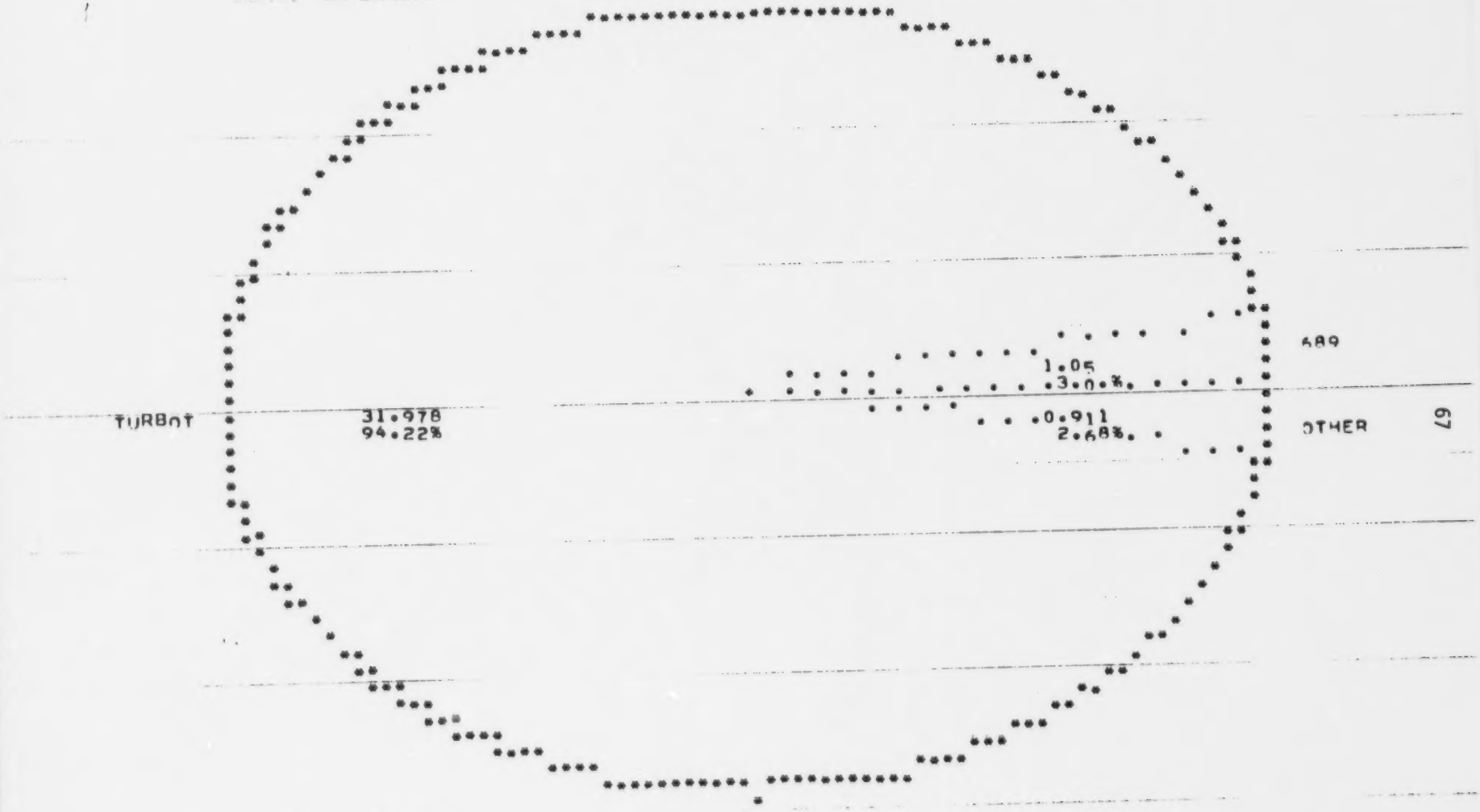


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2H UNITAREA=215

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

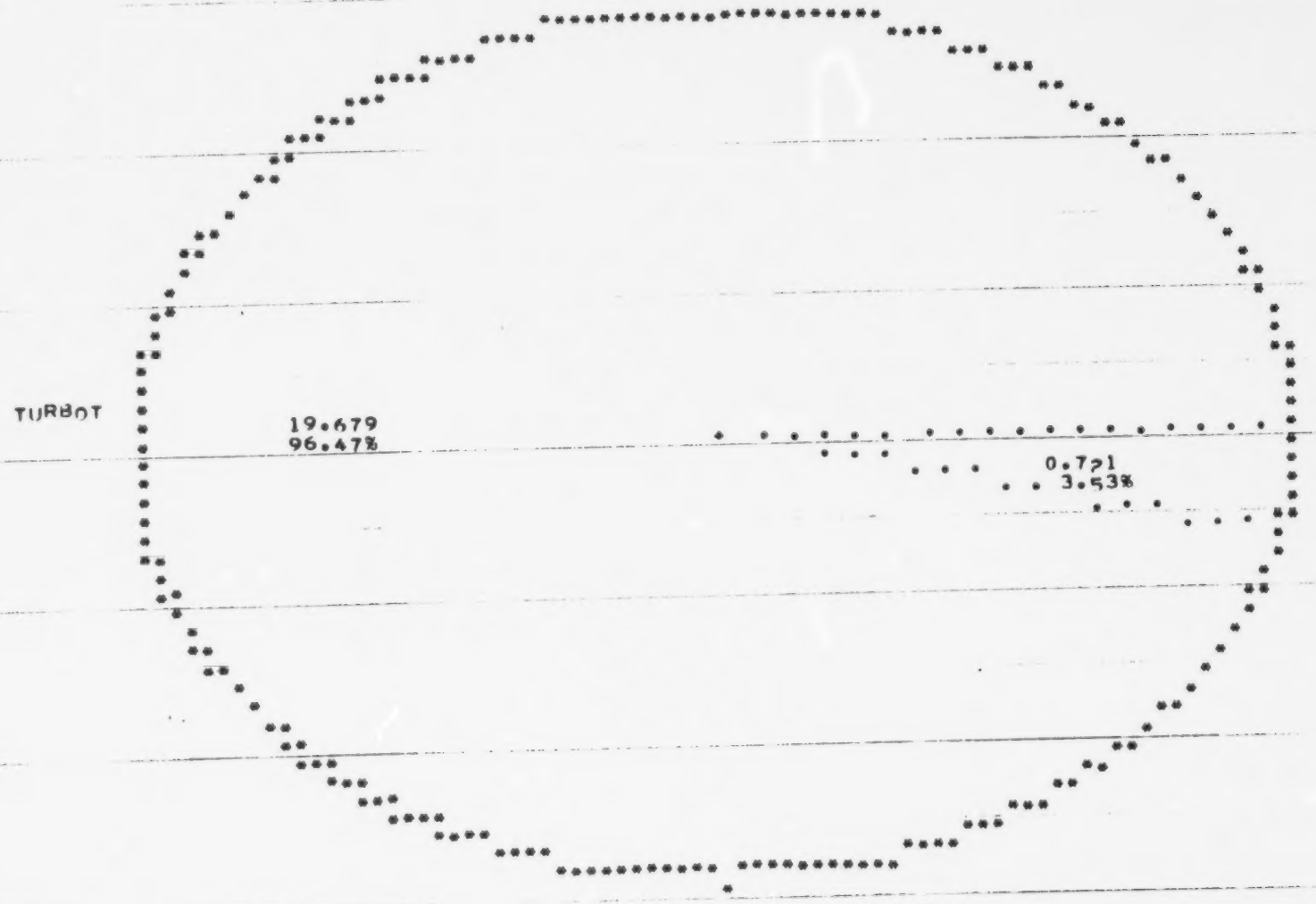


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2J UNITAREA=210

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

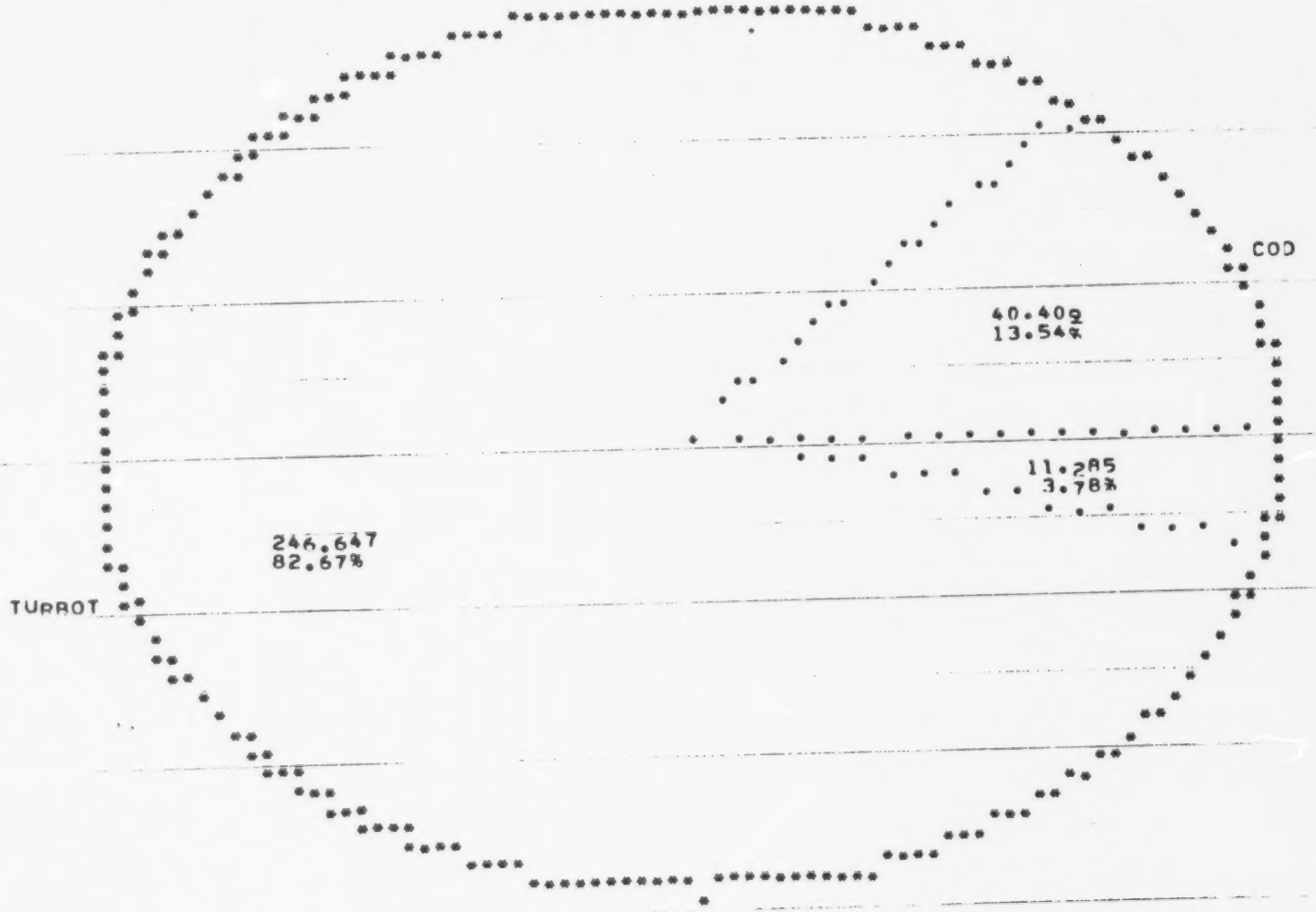


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2H UNITAREA=212

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

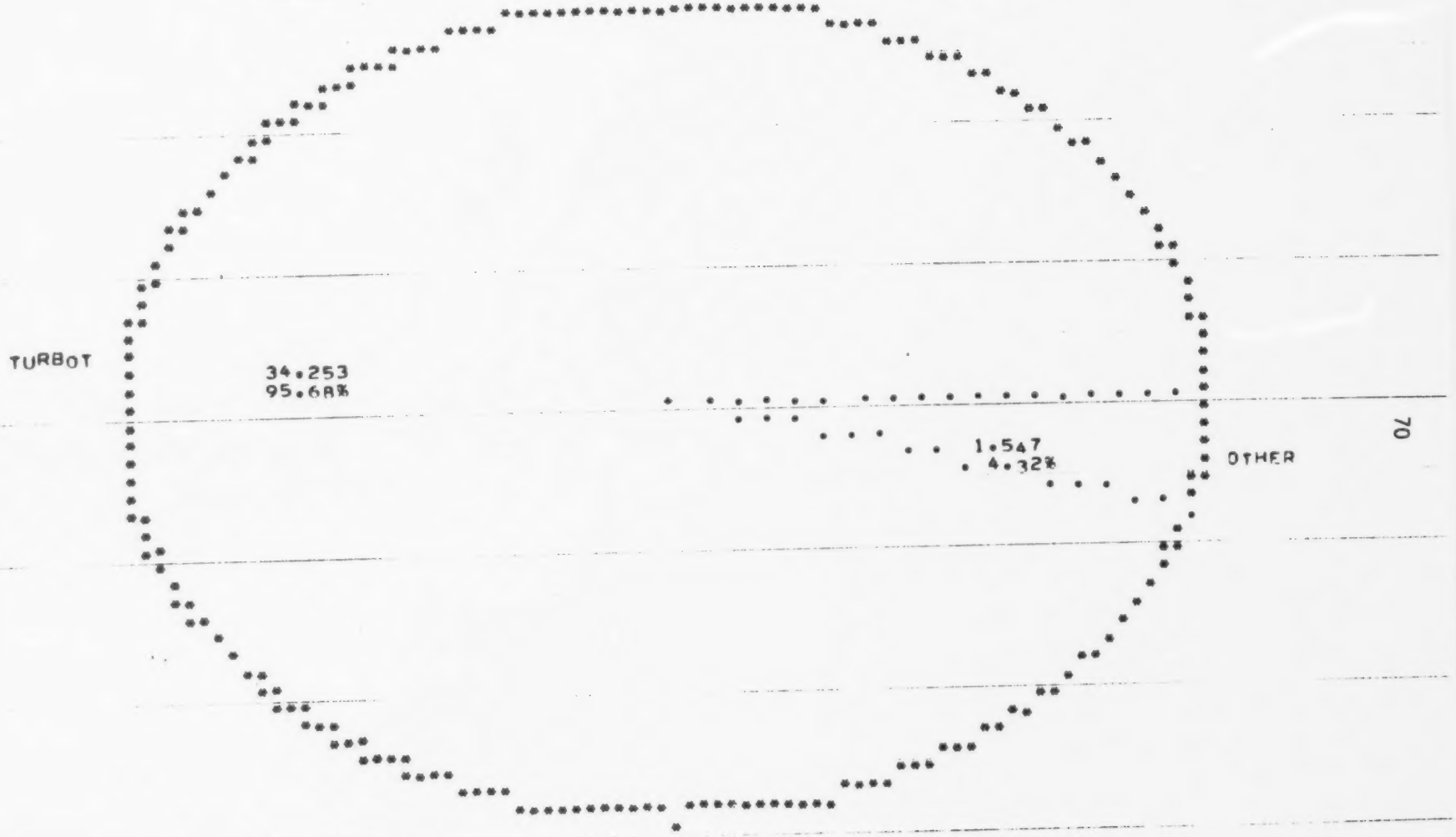


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2H UNITAREA=215

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

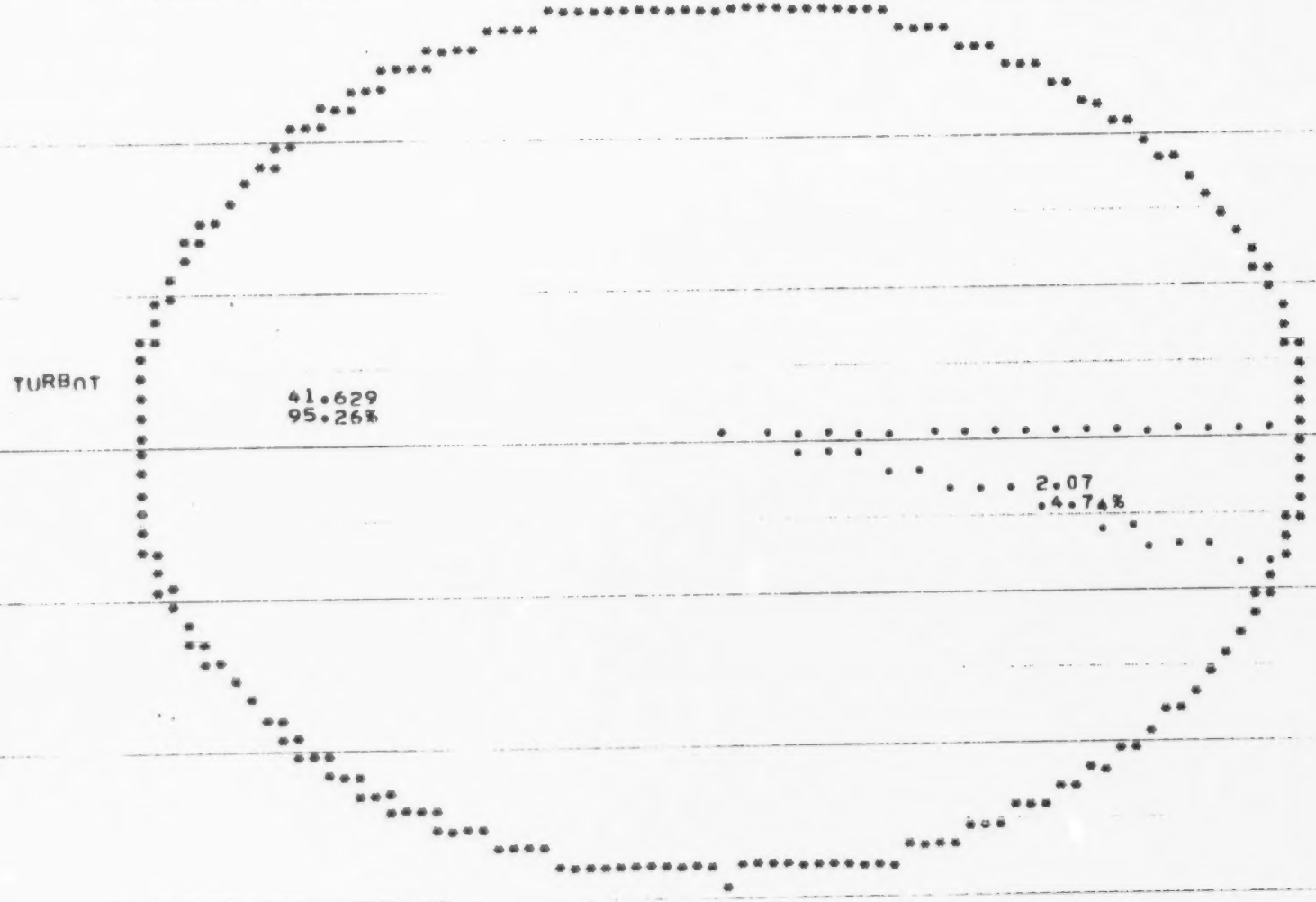


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=GDR MONTH=AUG NAFO=3K UNITAREA=339

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

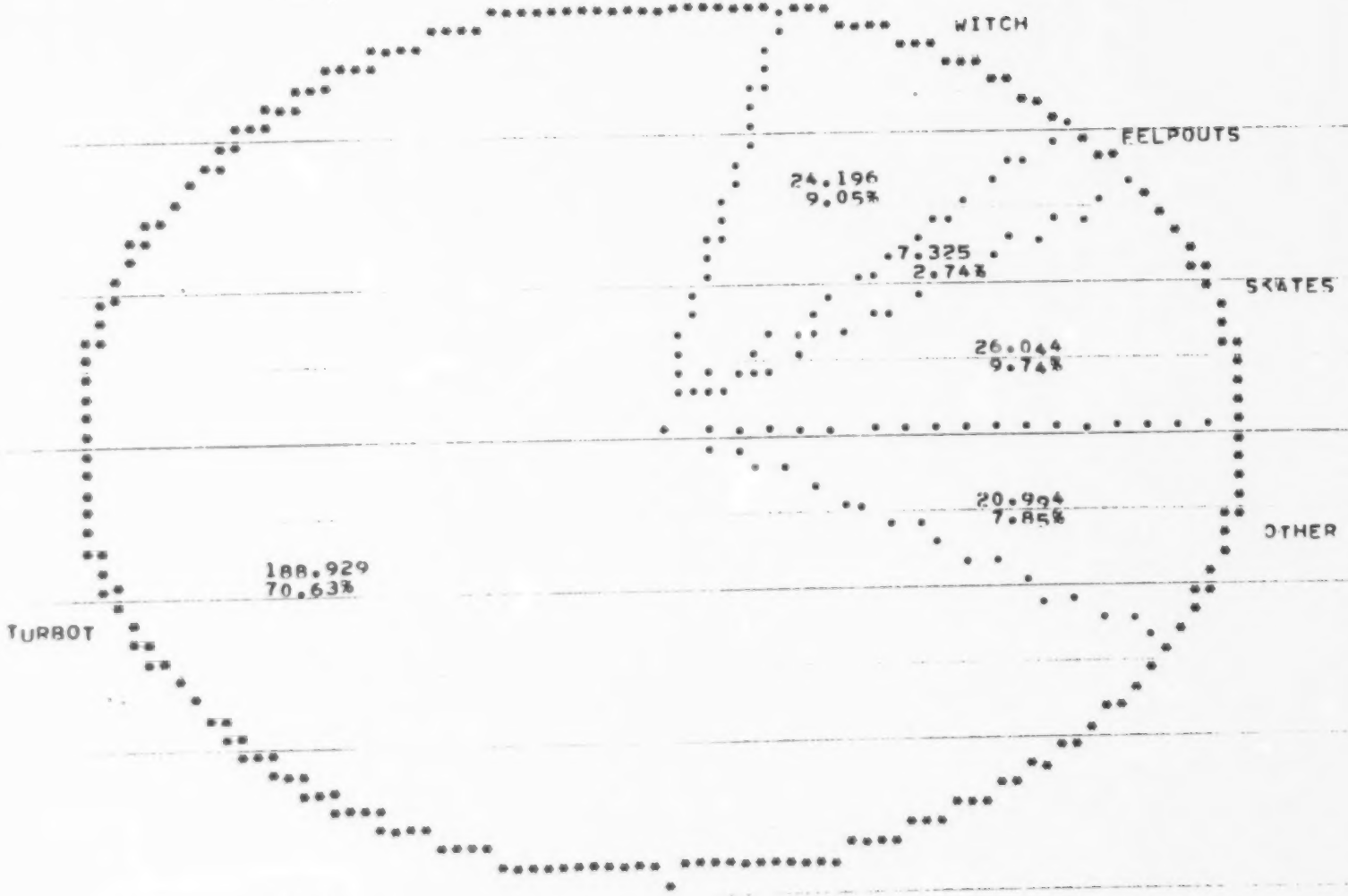


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=GDR MONTH=AUG NAFO=3K UNITAREA=344

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

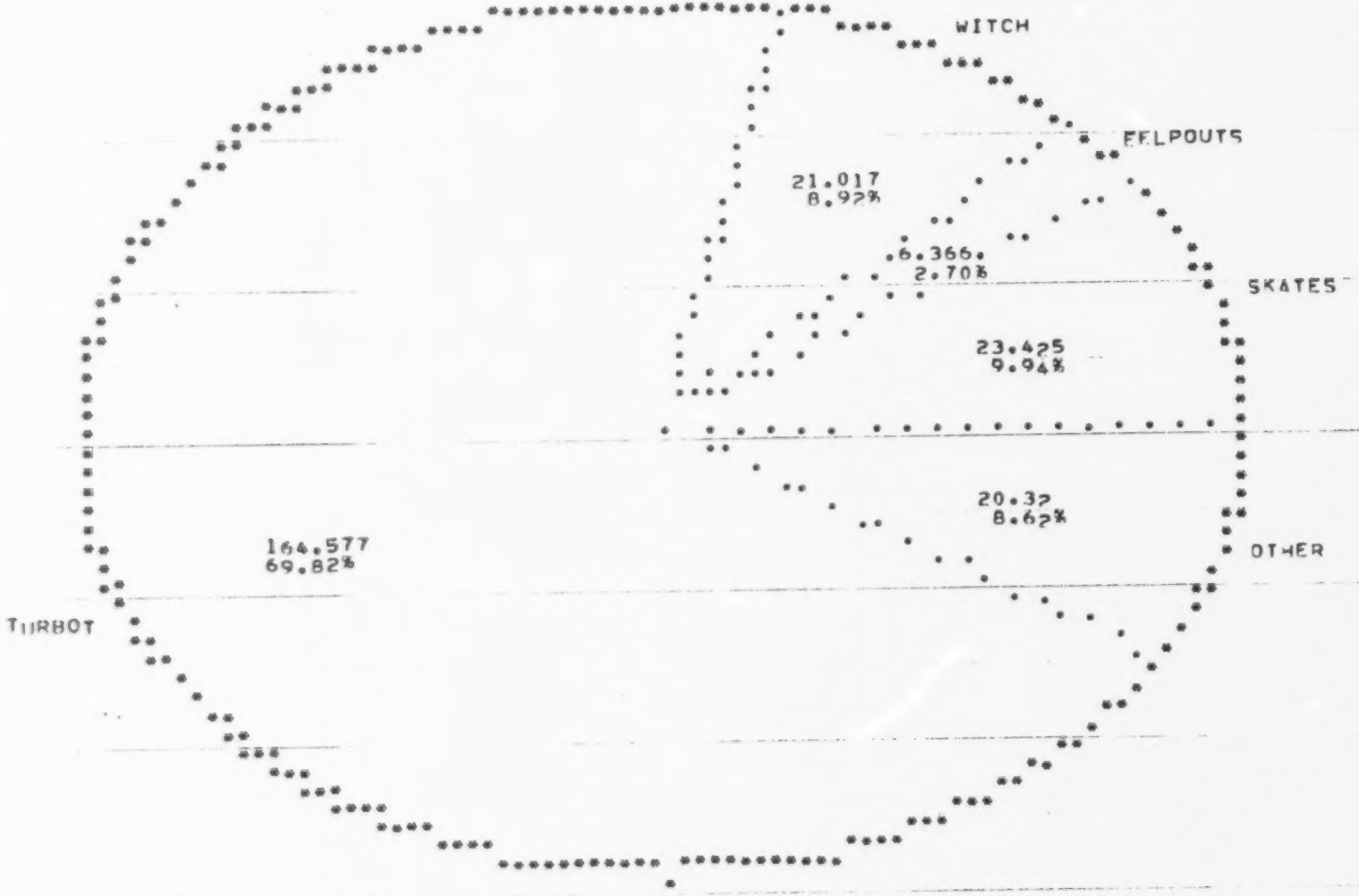


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983
DIRECT=TURBOT COUNTRY=GDR MONTH=AUG NAFO=3K UNITAREA=345
SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

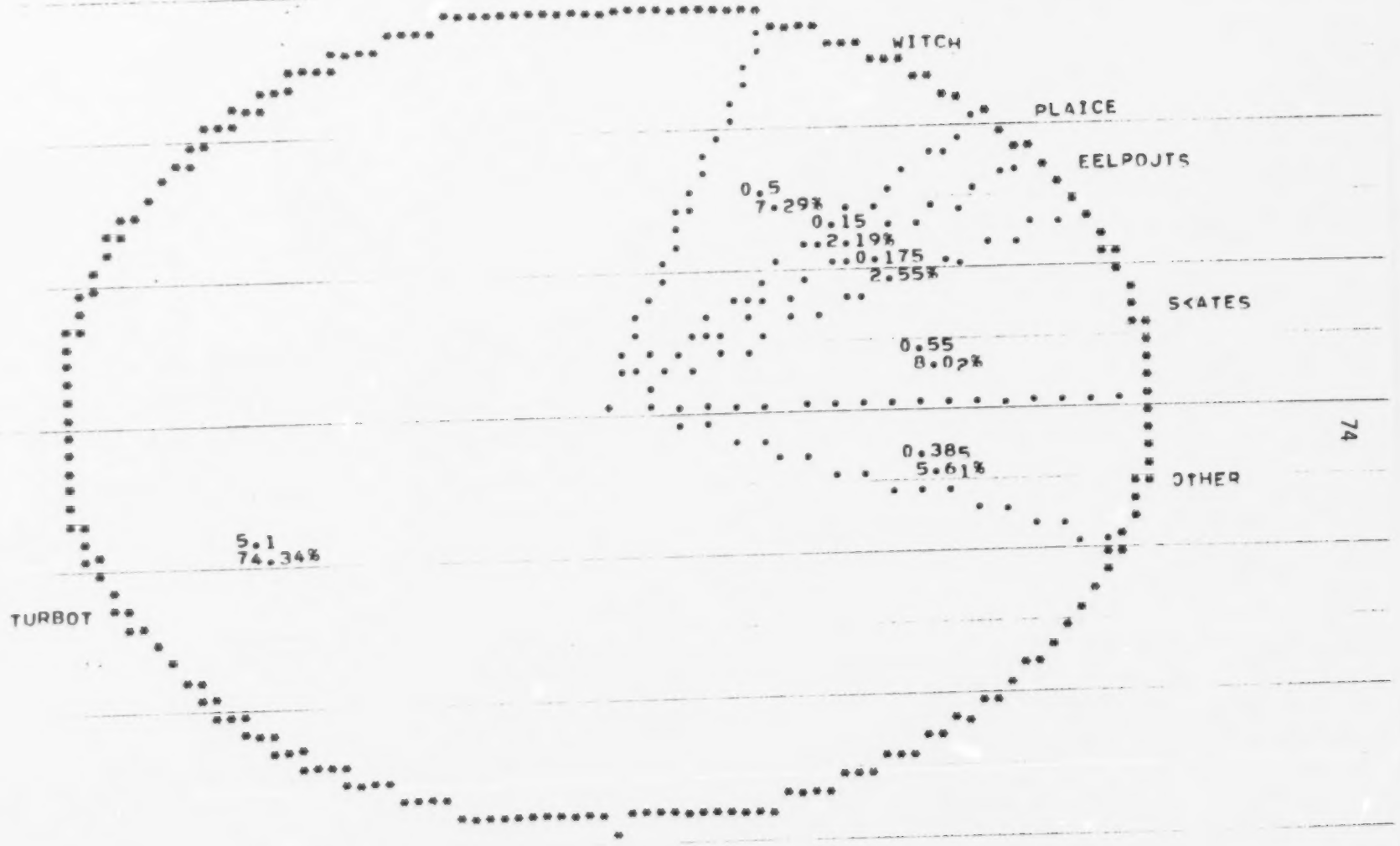


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=GDR MONTH=AUG NAFO=3K UNITAREA=347

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

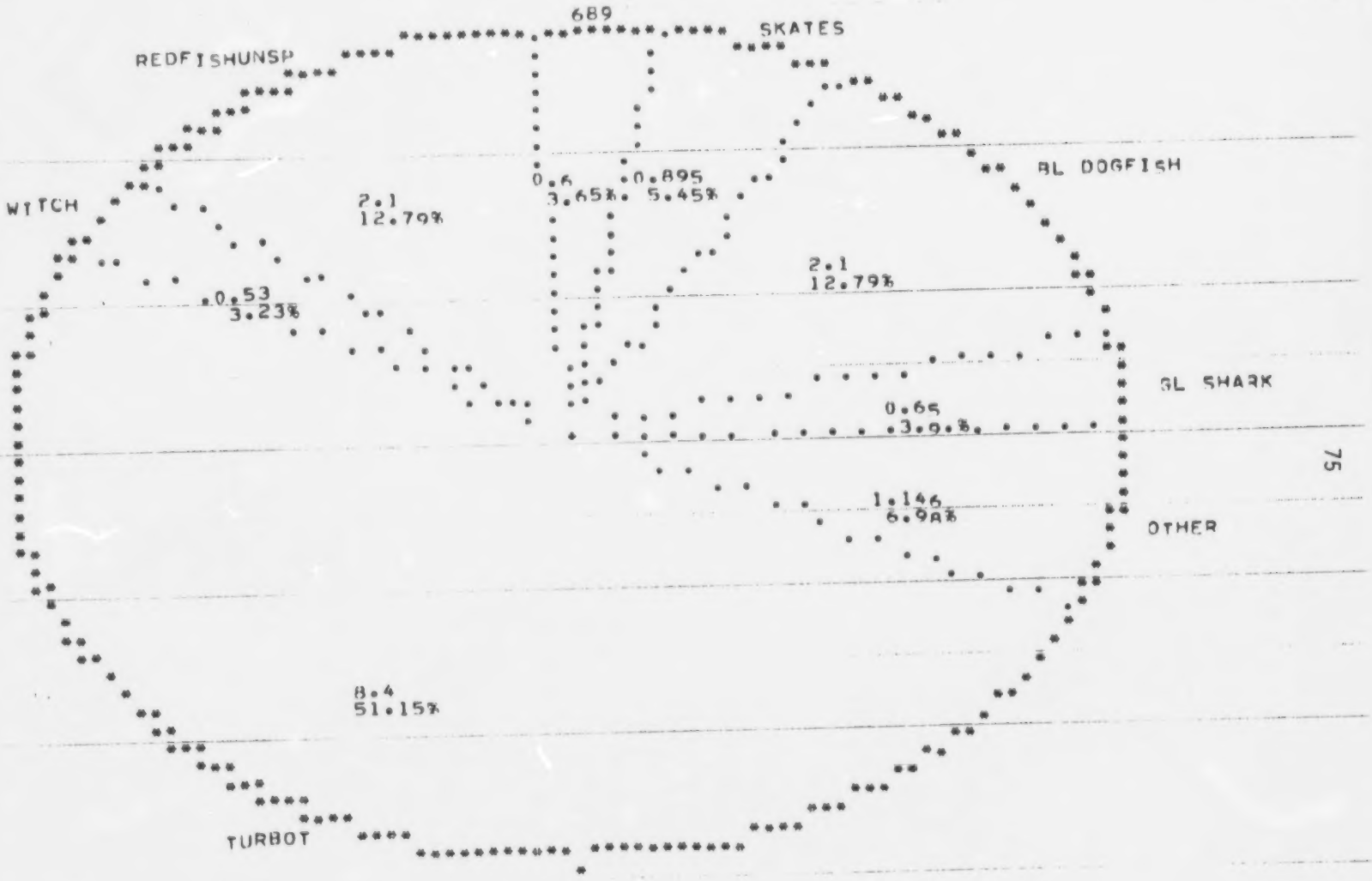


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JAN NAFO=2J UNITAREA=203

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

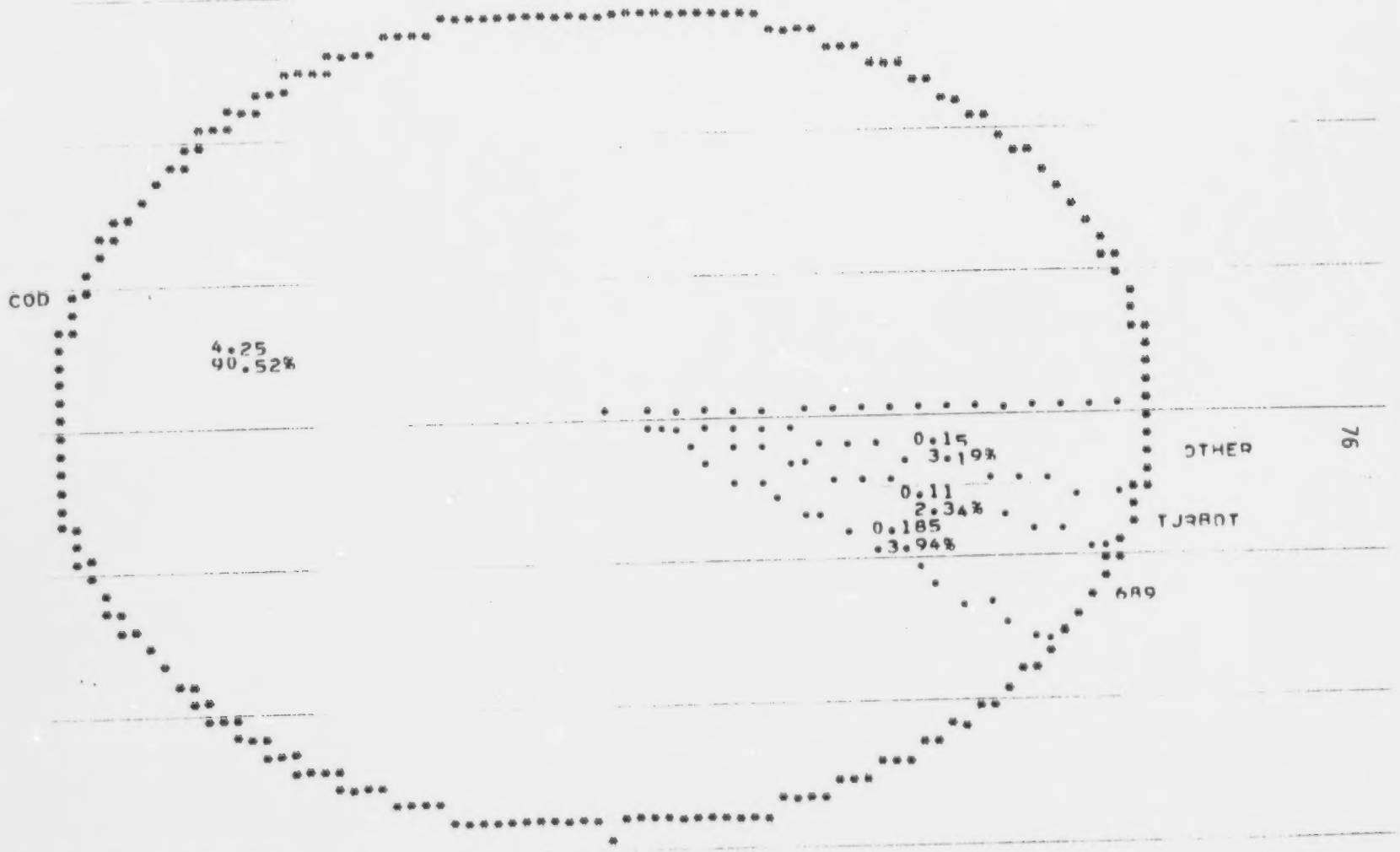


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JAN NAFO=3K UNITAREA=339

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

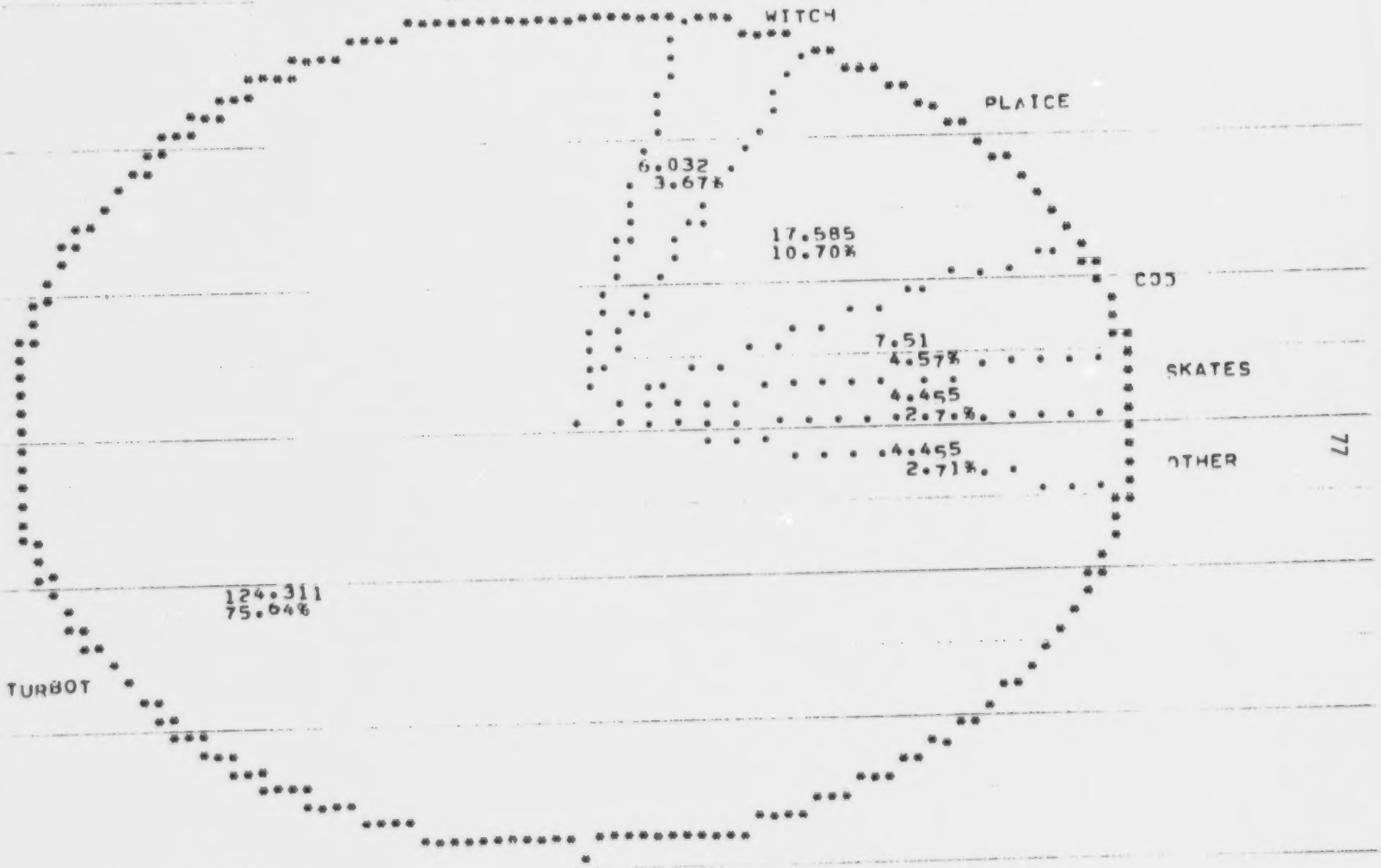


Fig. 1. SPECIES COMPOSITION.TURBOT FISHERY.1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JAN NAFO=3K UNITAREA=344

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

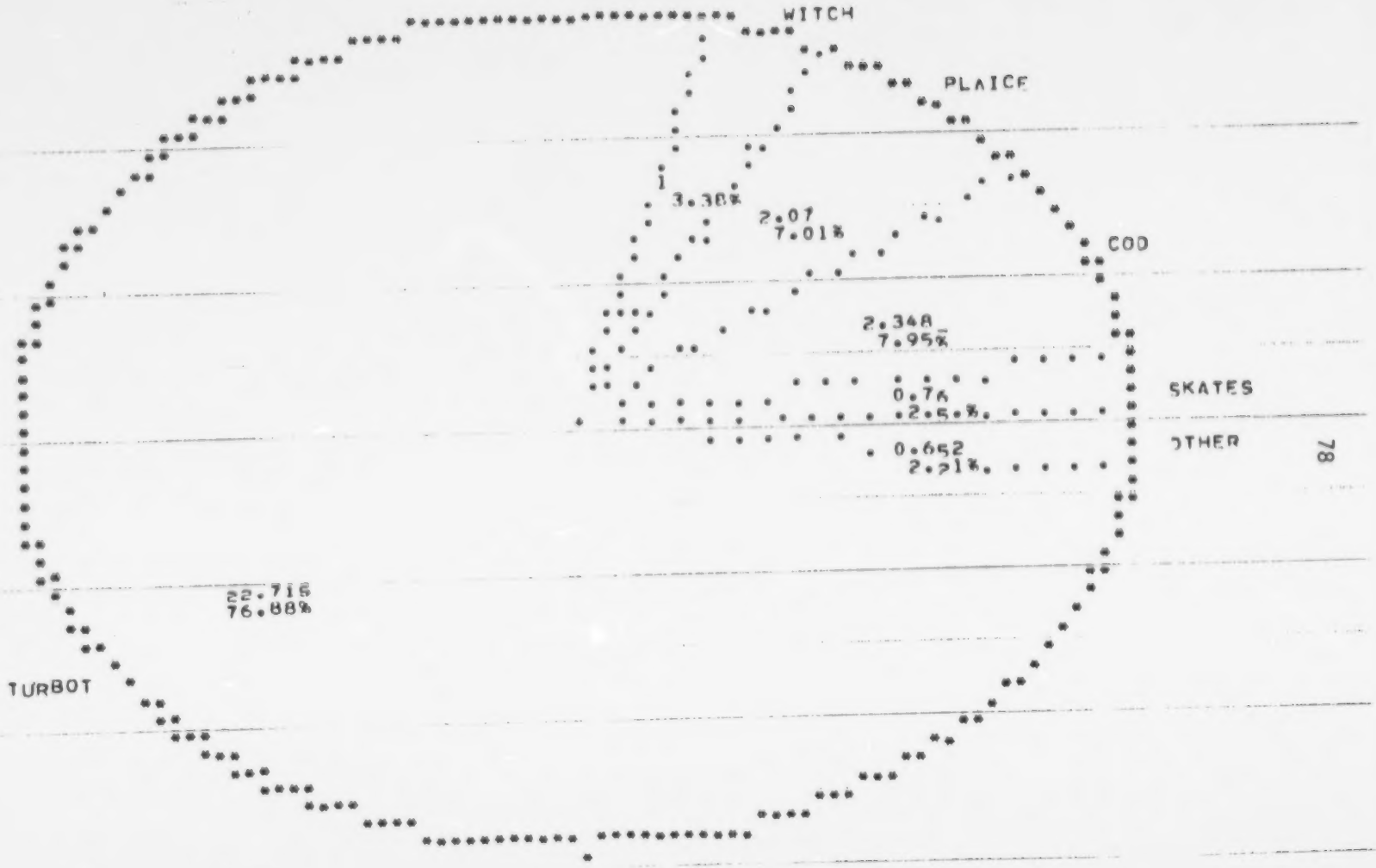


Fig. 1. SPECIES COMPOSITION.TURBOT FISHERY.1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JAN NAFO=3K UNITAREA=345

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

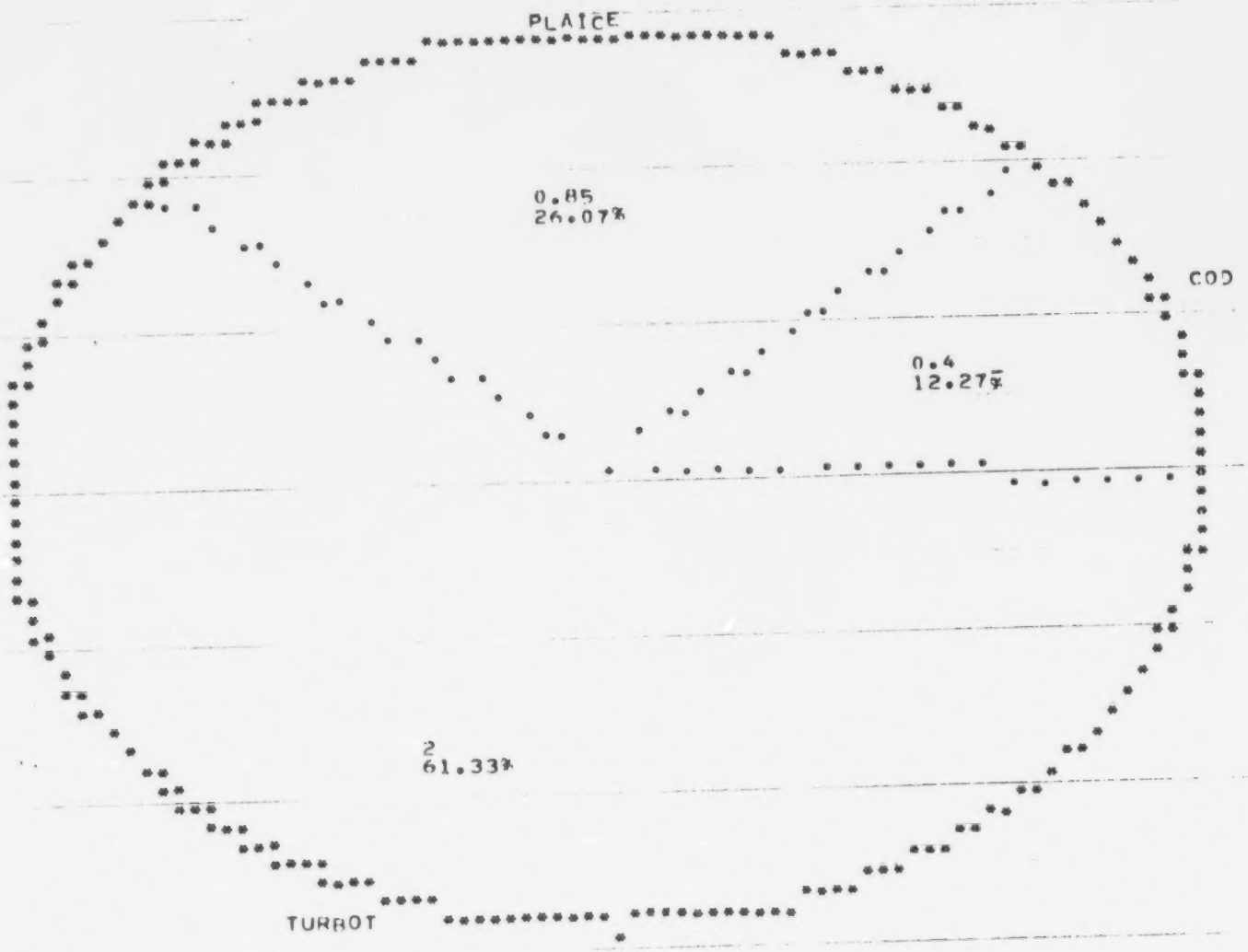


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JAN NAFO=3K UNITAREA=346

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

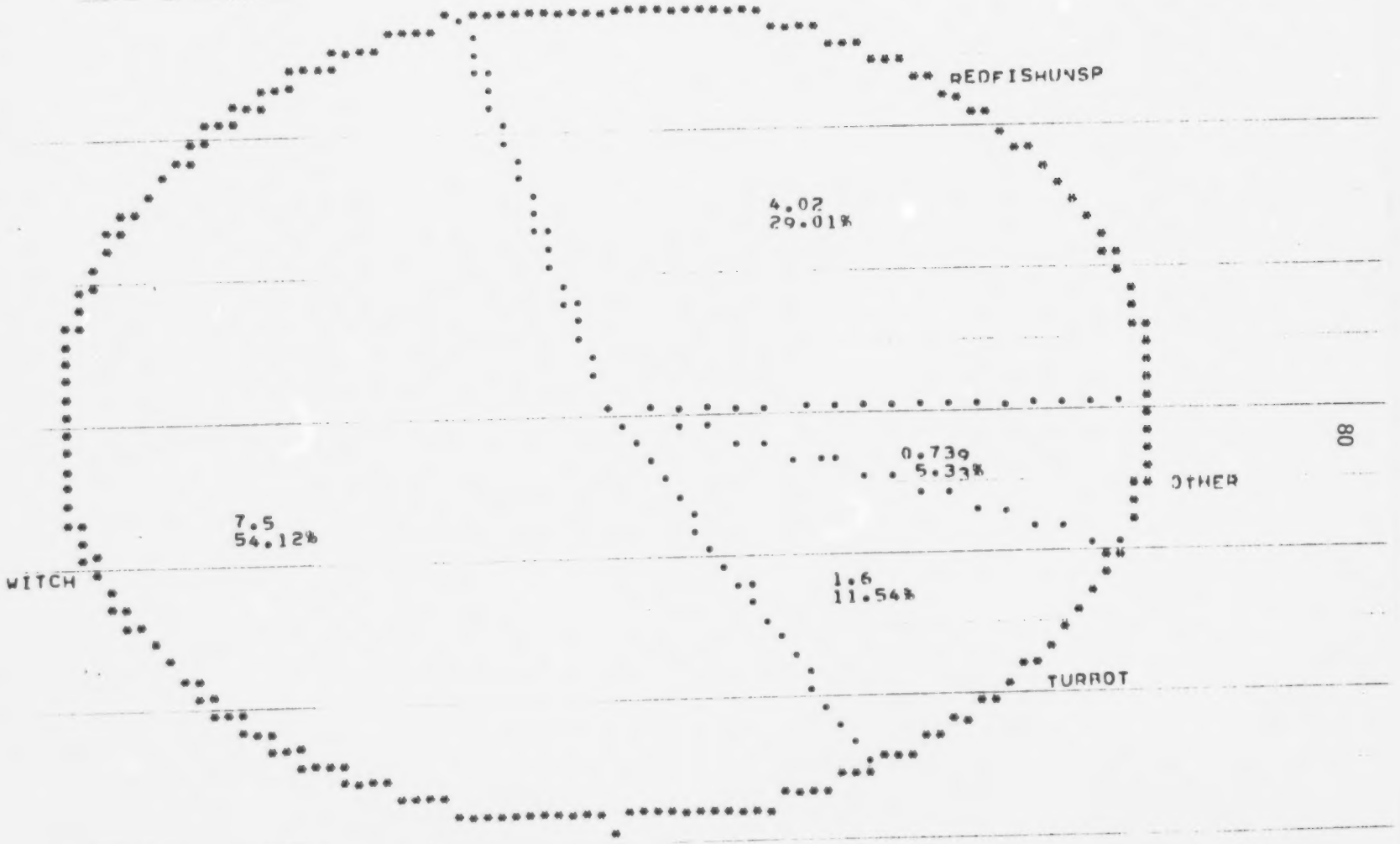


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=2J UNITAREA=203

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

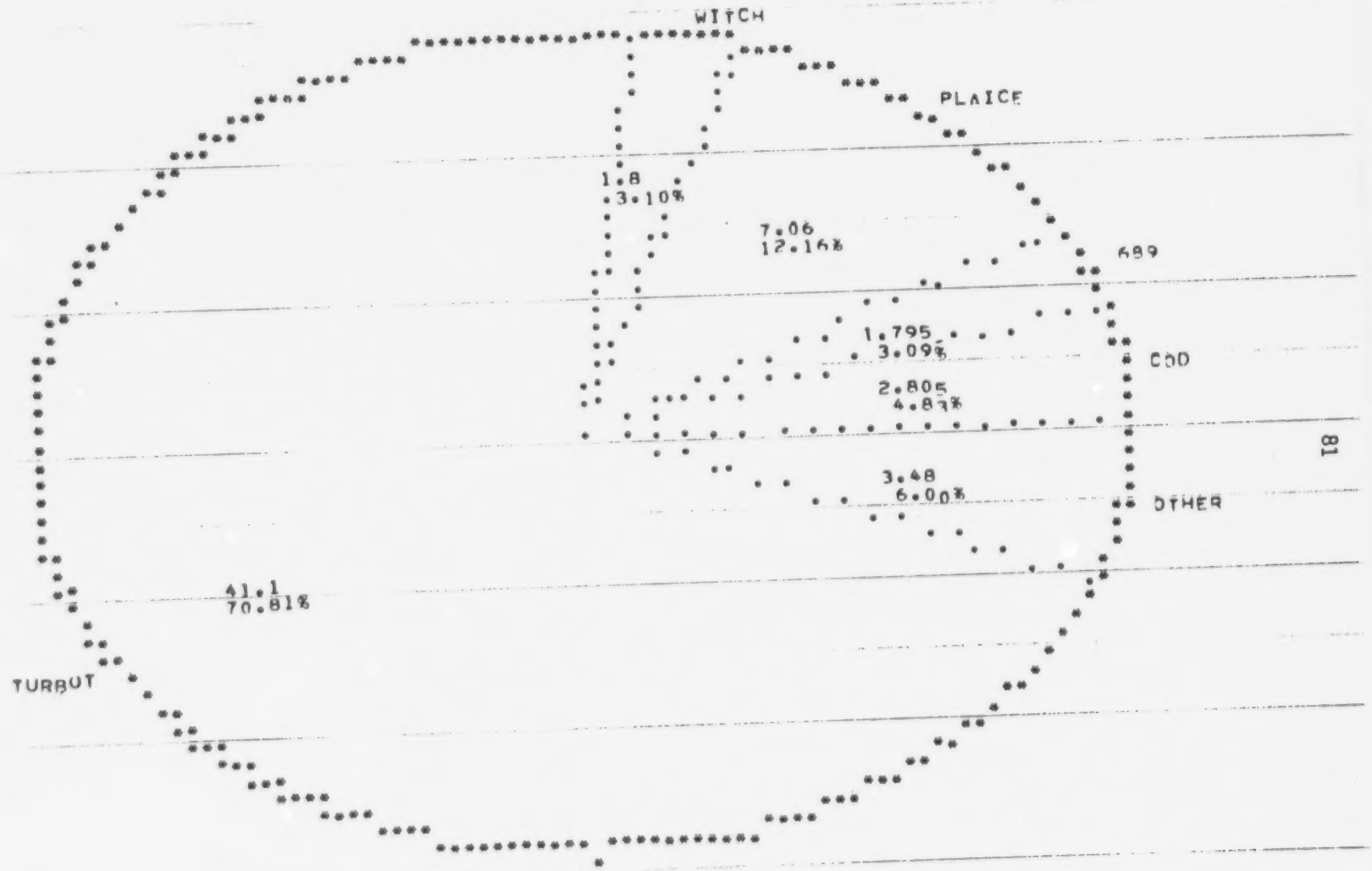


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=2J UNITAREA=204

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

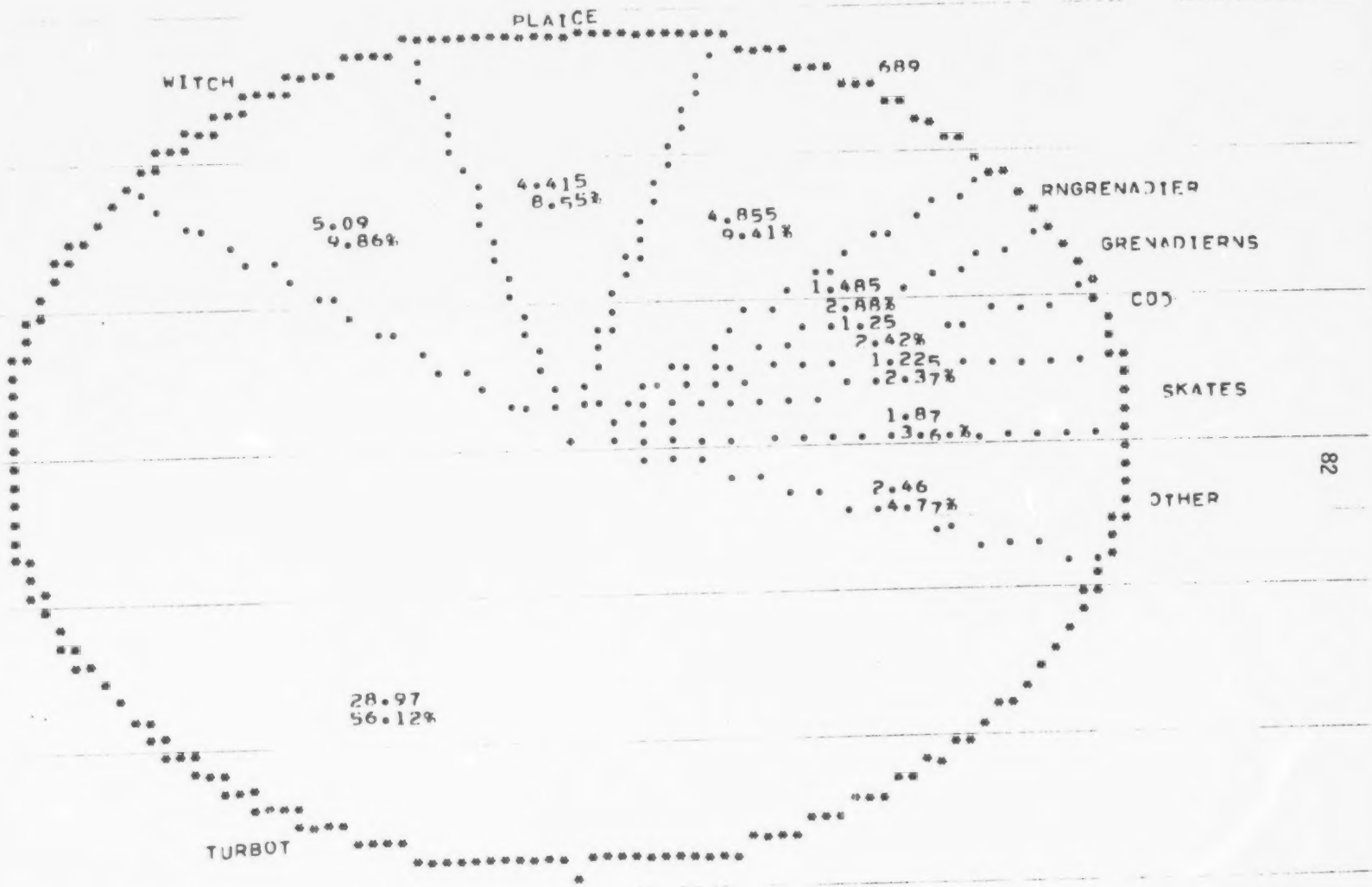


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=2J UNITAREA=206

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

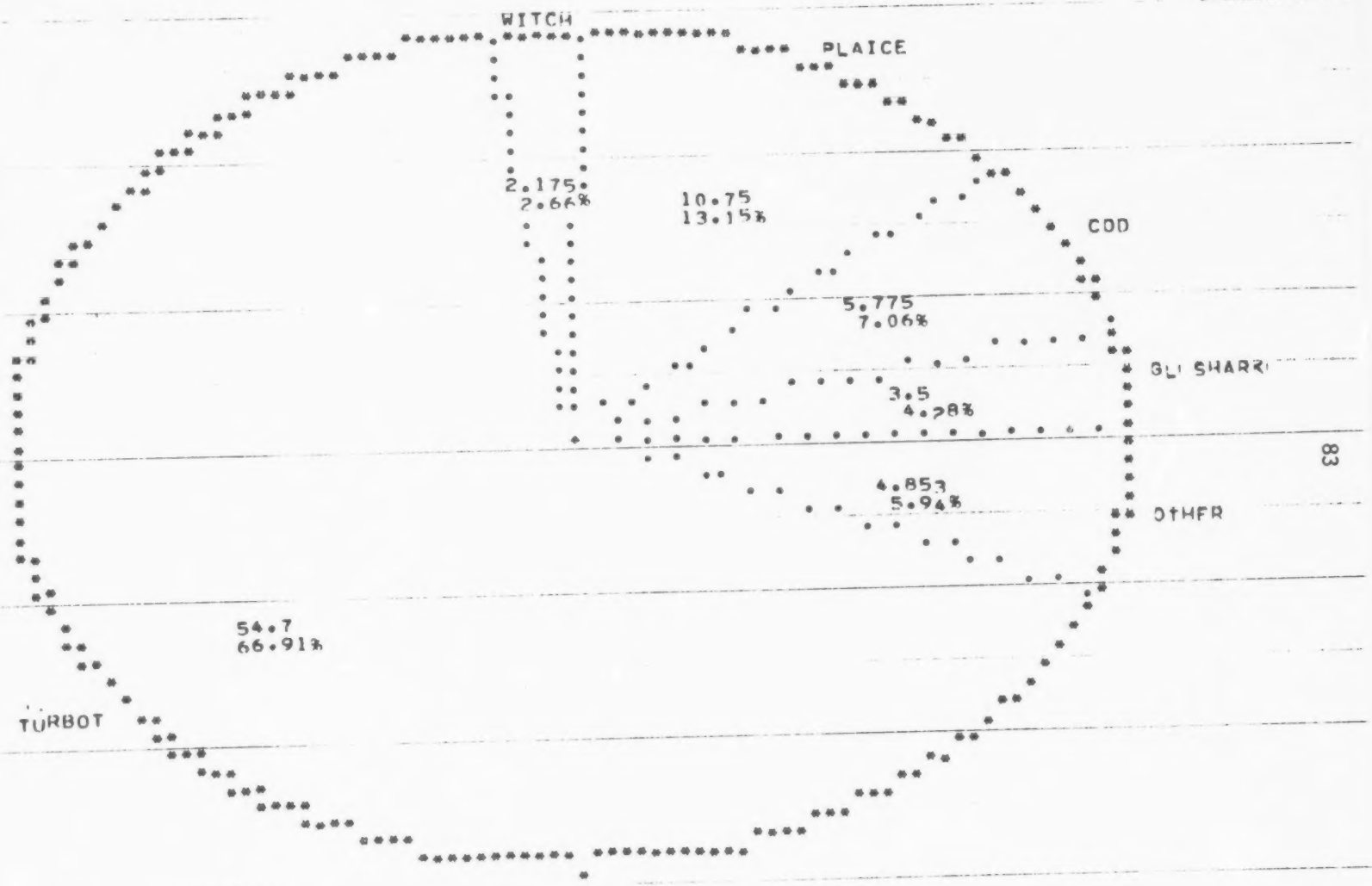


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=3K UNITAREA=339

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

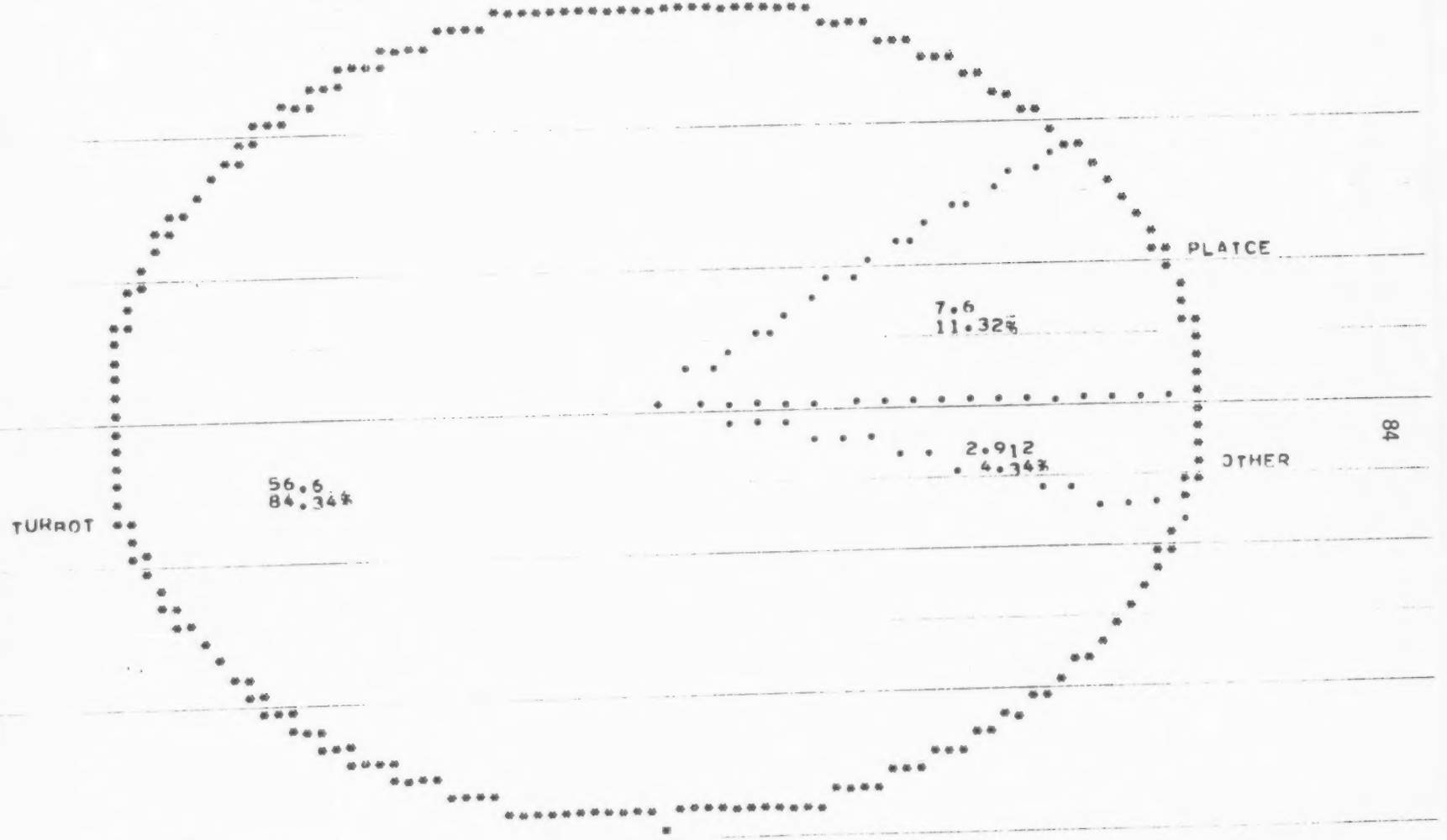


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=3K UNITAREA=344

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

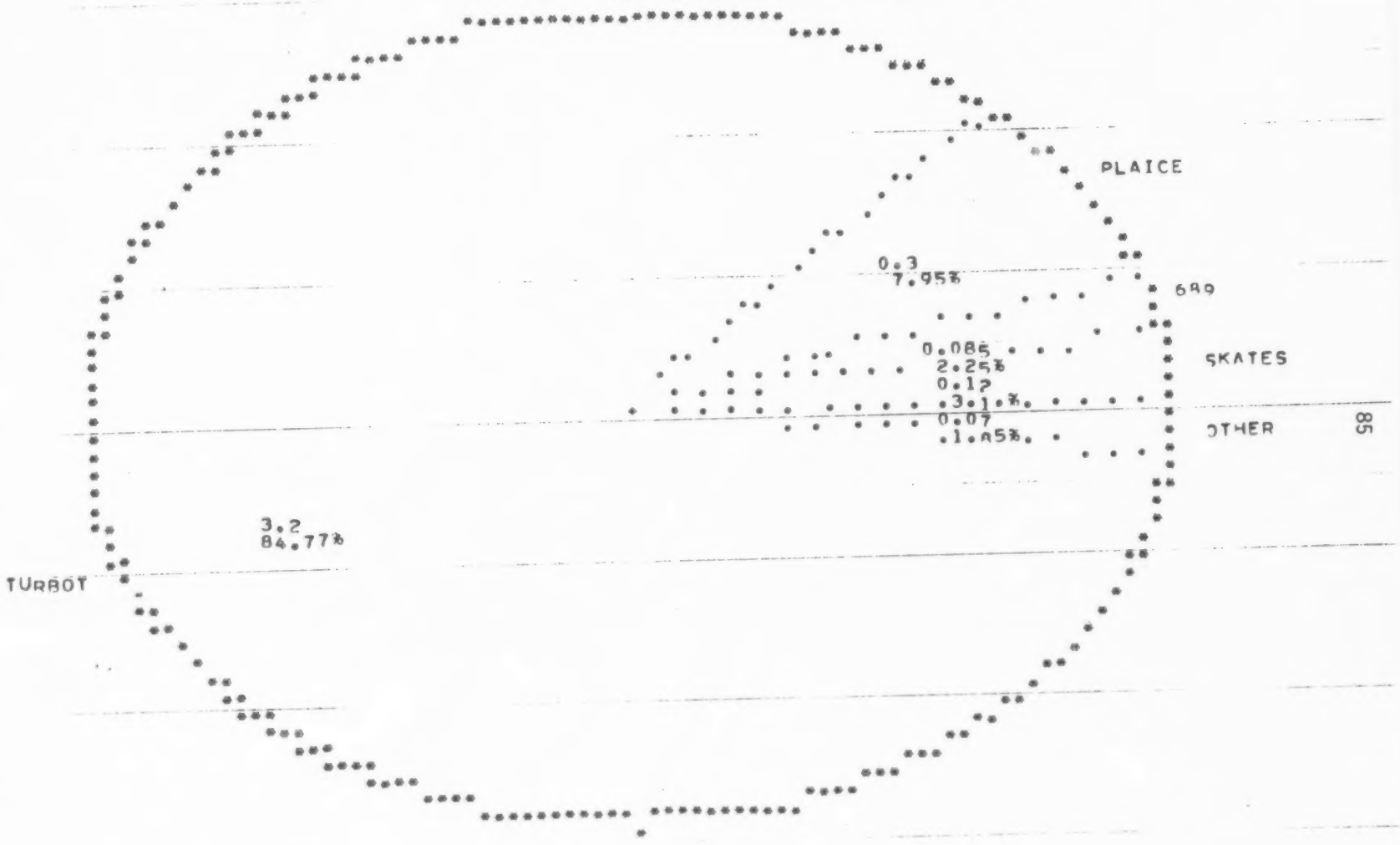


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=3K UNITAREA=346

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

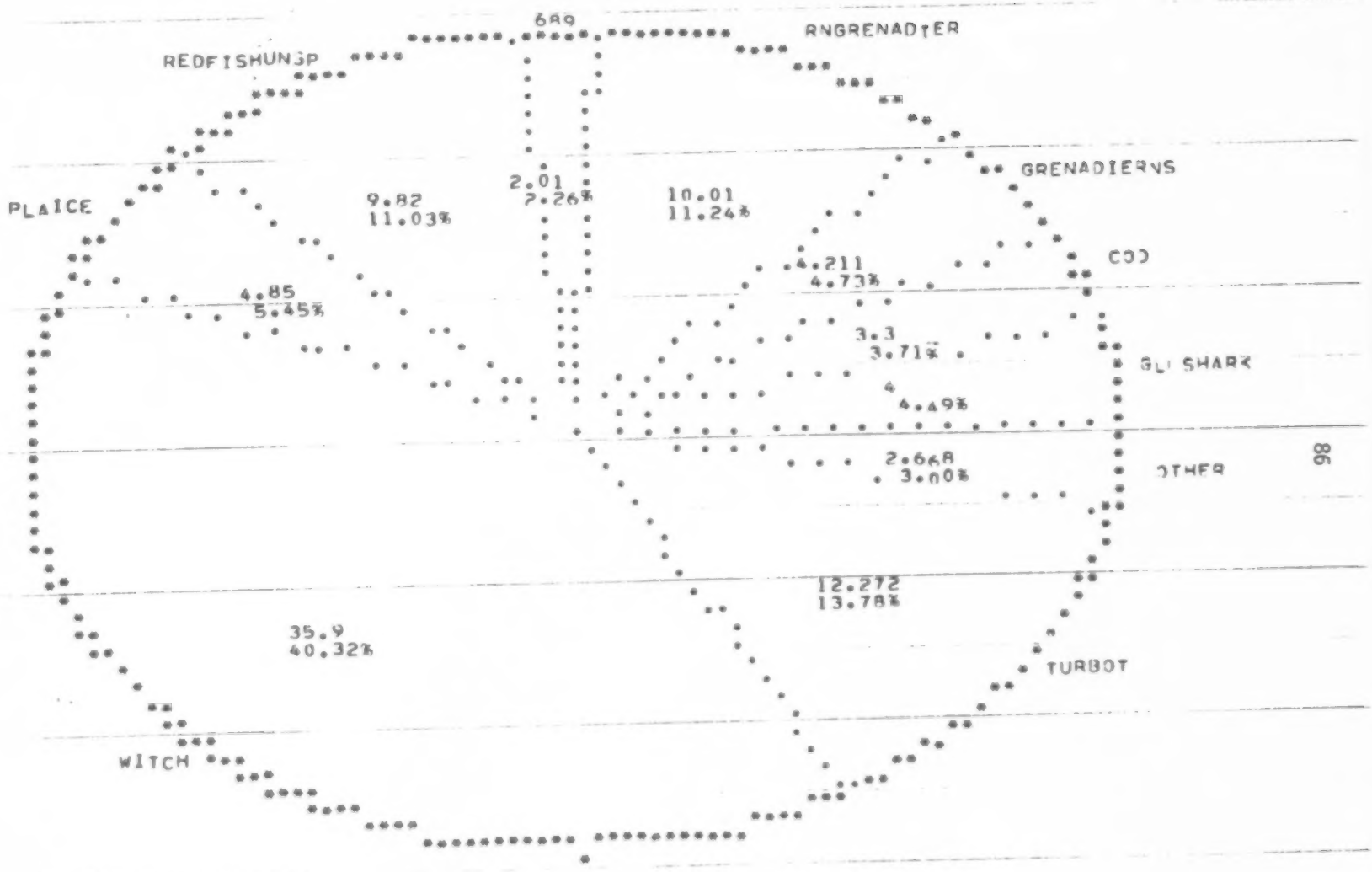


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=3K UNITAREA=347

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

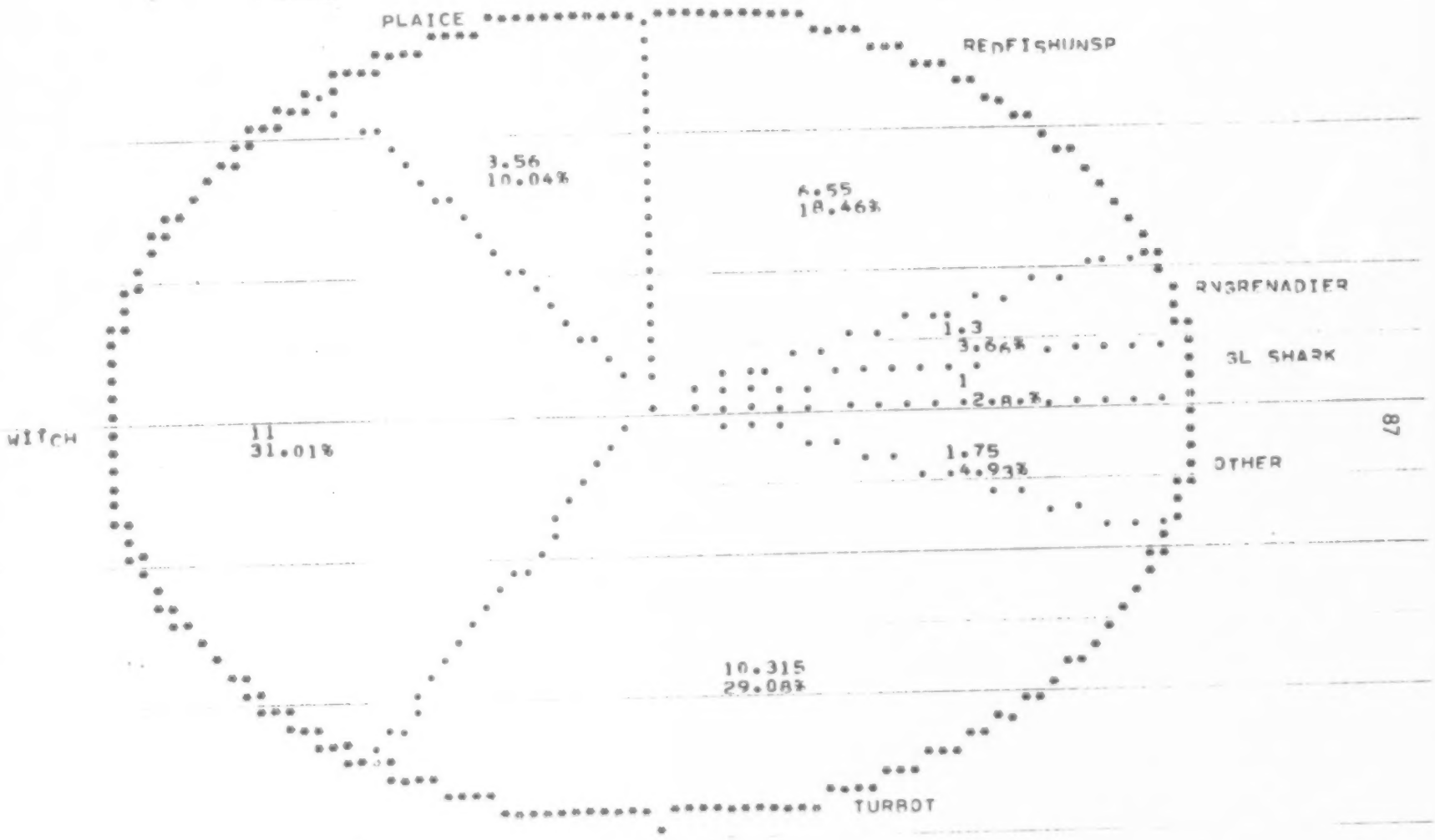


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983
DIRECT=TURBOT COUNTRY=POLAND MONTH=MAY NAFO=3K UNITAREA=339
SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

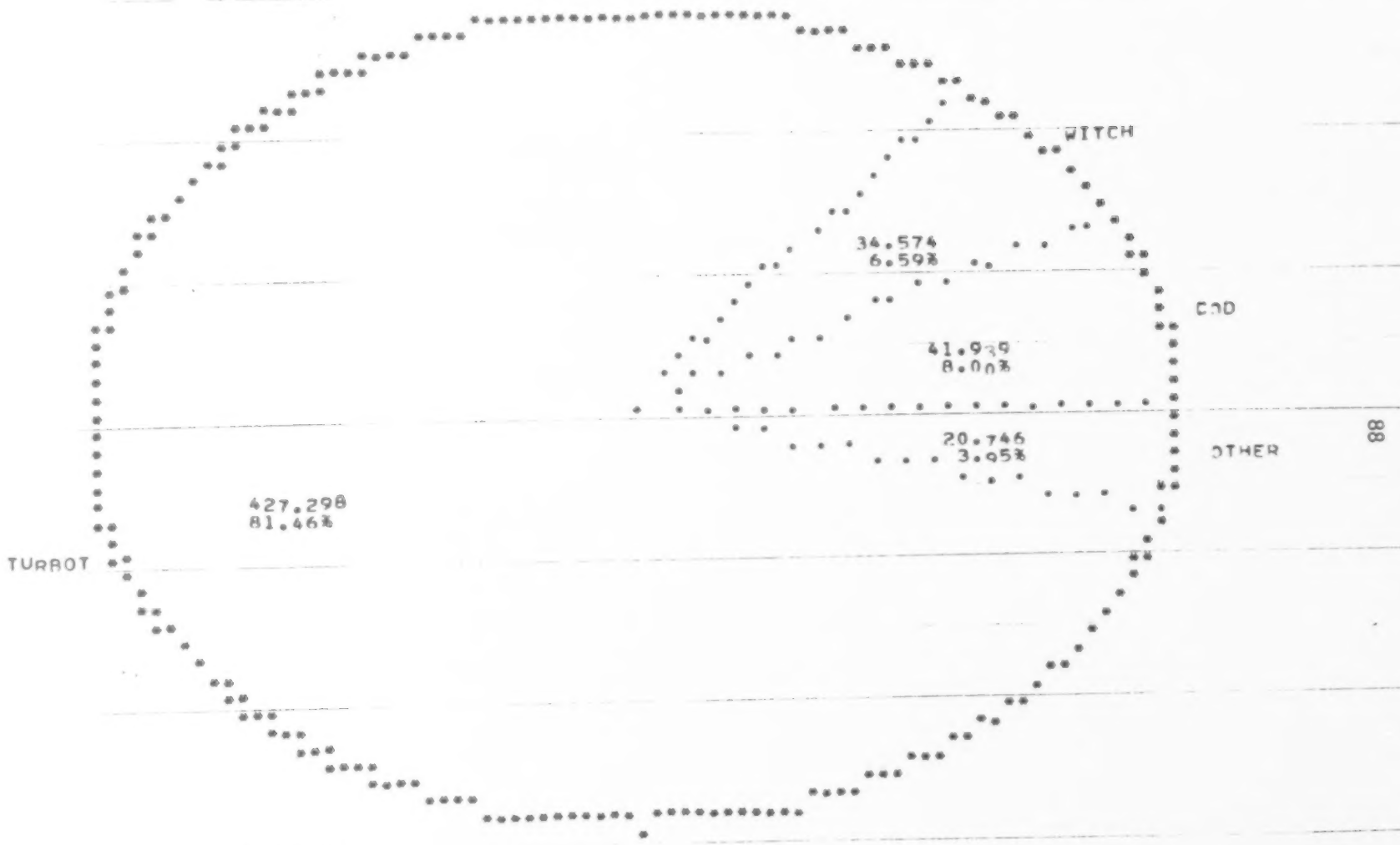


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=MAY NAFO=3K UNITAREA=344

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

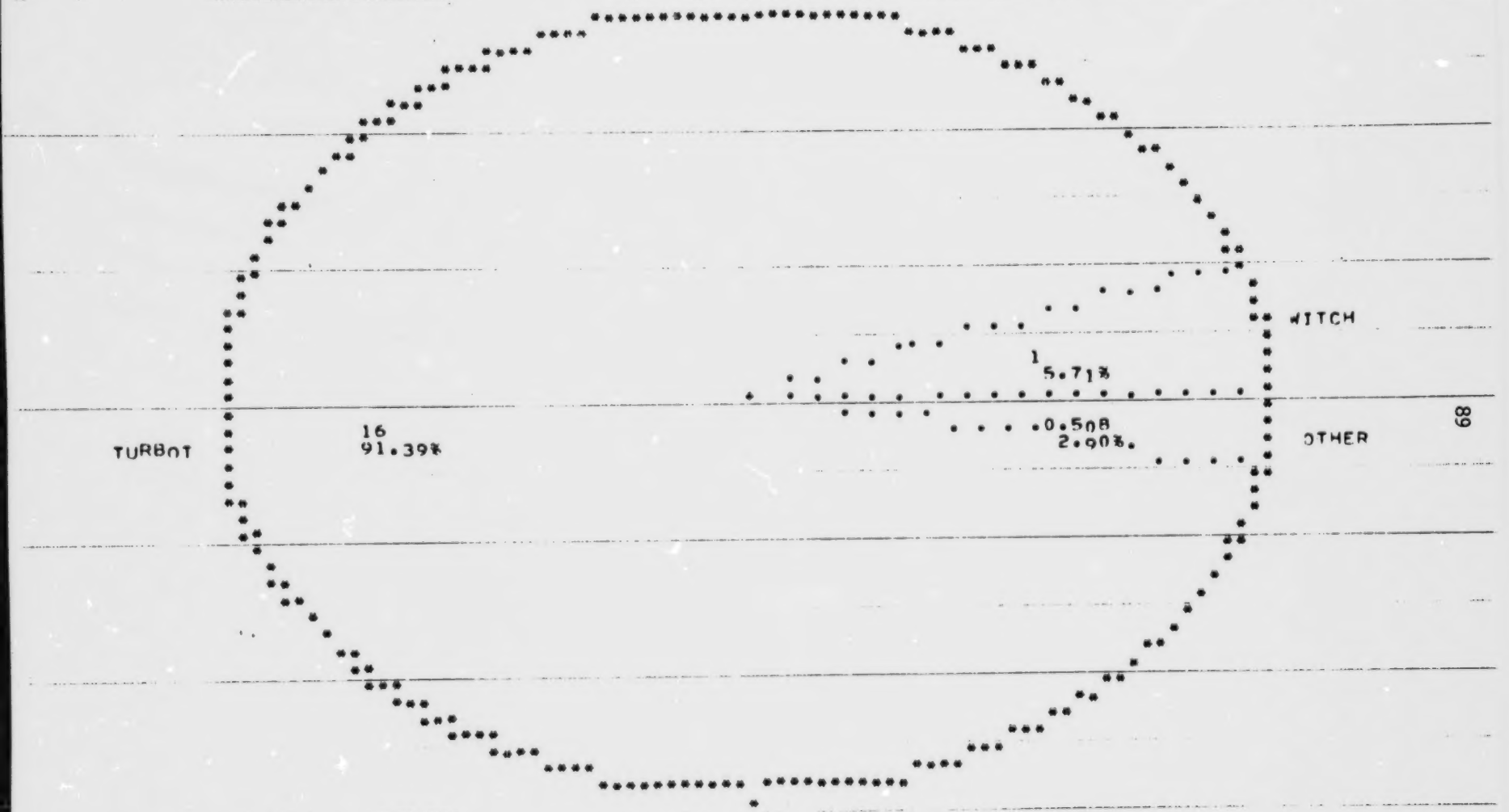


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JUNE NAFO=3K UNITAREA=339

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

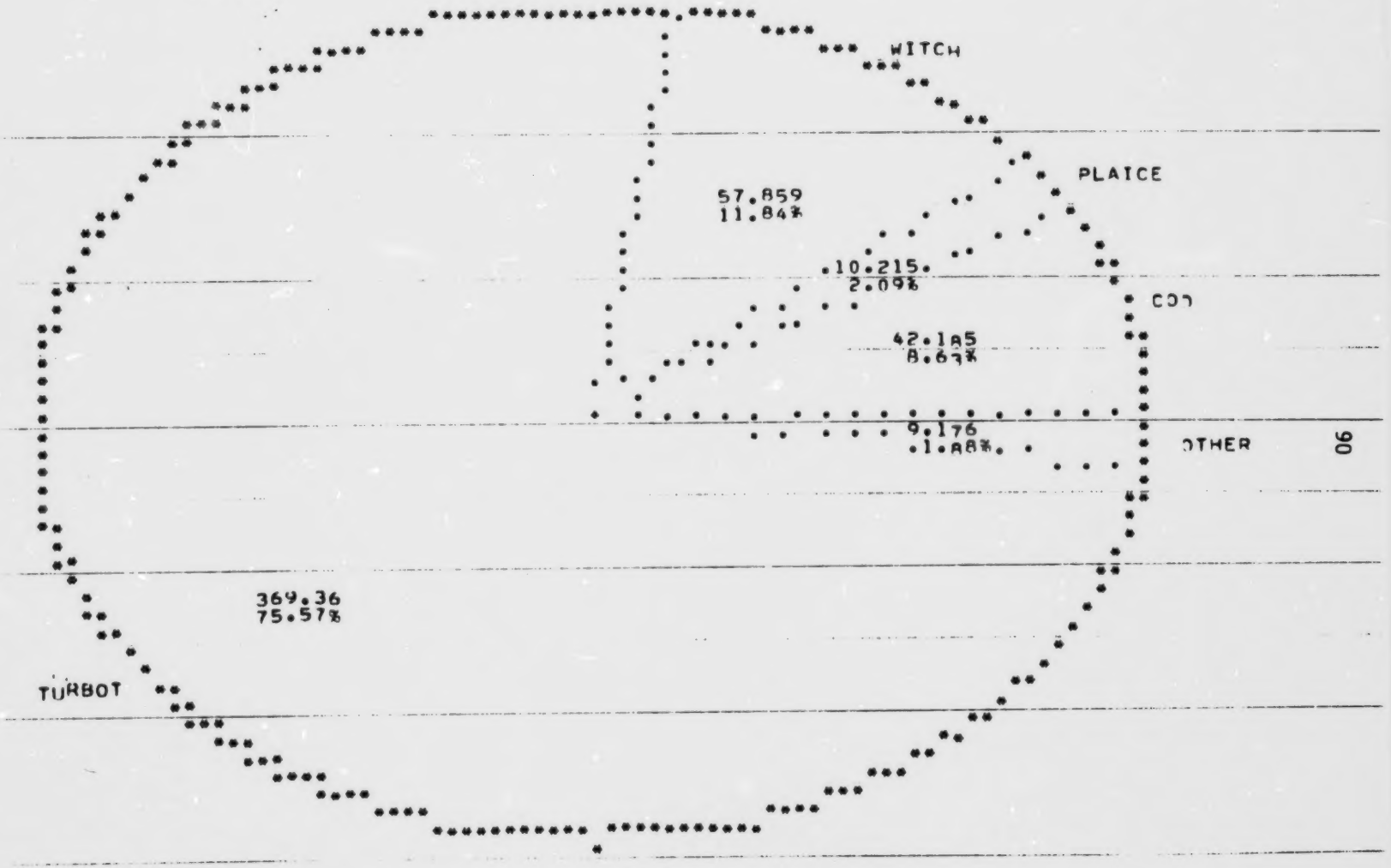


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JUNE NAFO=3K UNITAREA=344

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

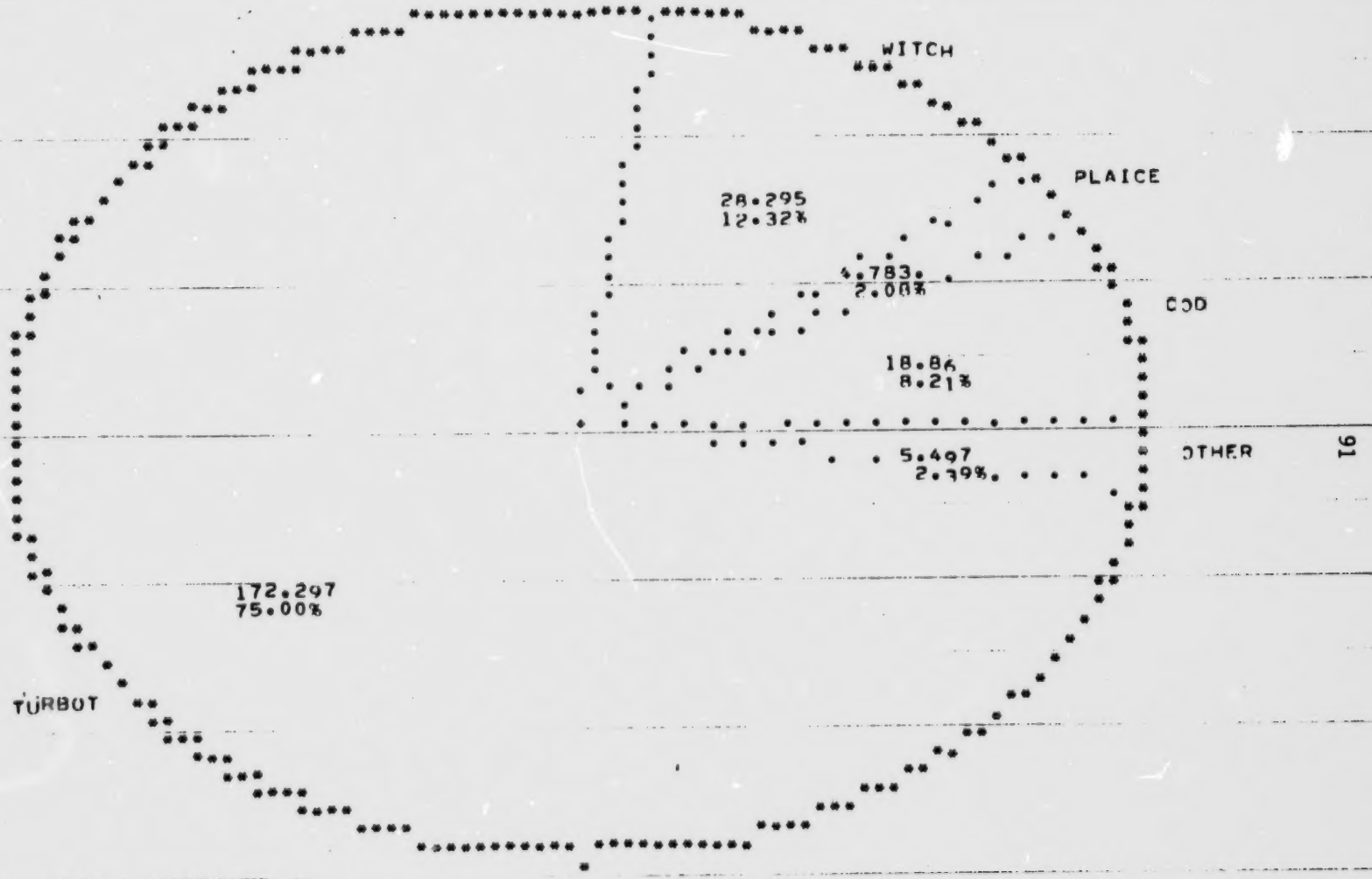


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JULY NAFO=2H UNITAREA=212

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

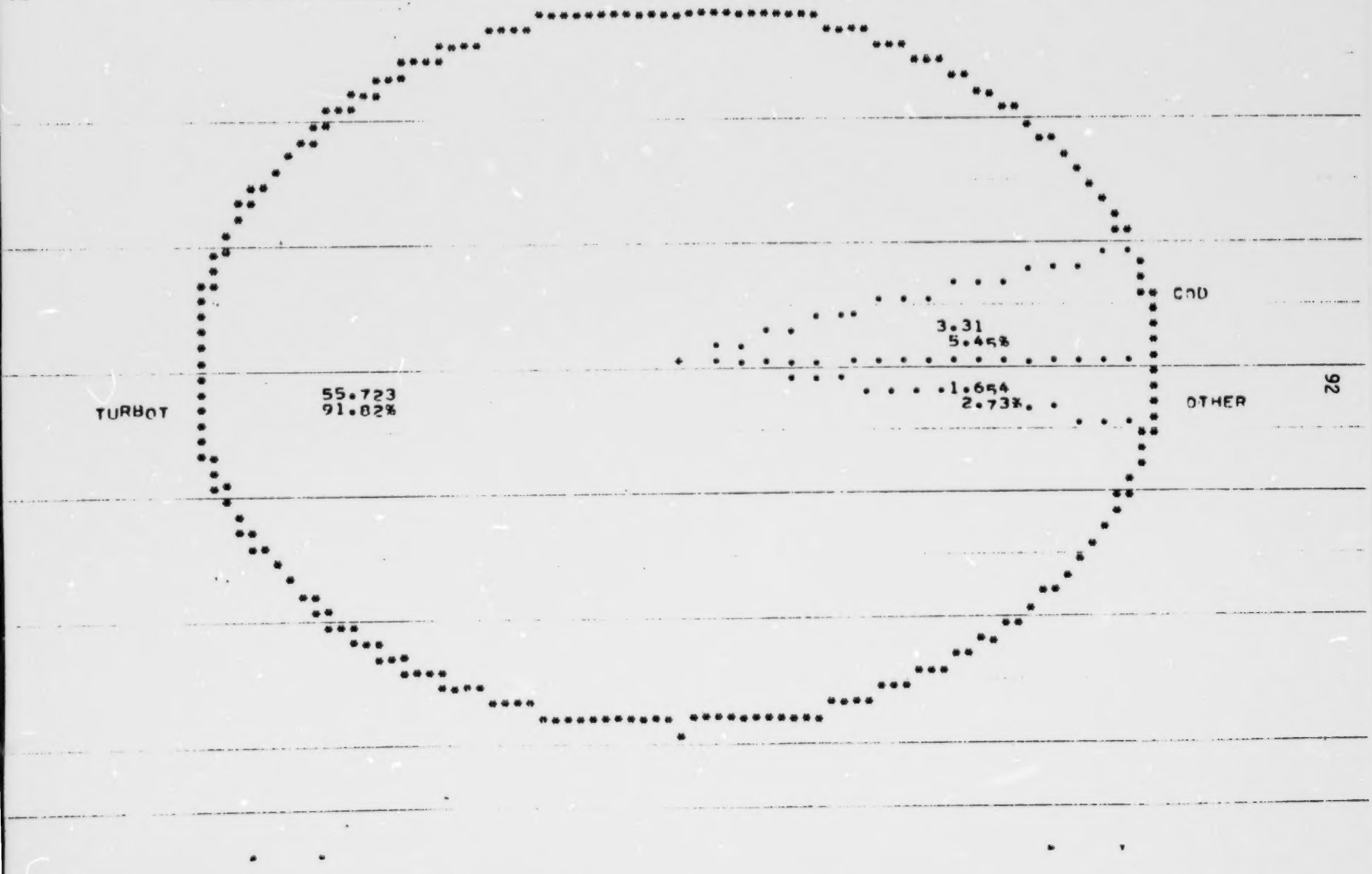


Fig. 1. SPECIES COMPOSITION.TURBOT FISHERY.1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JULY NAFO=2H UNITAREA=213

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

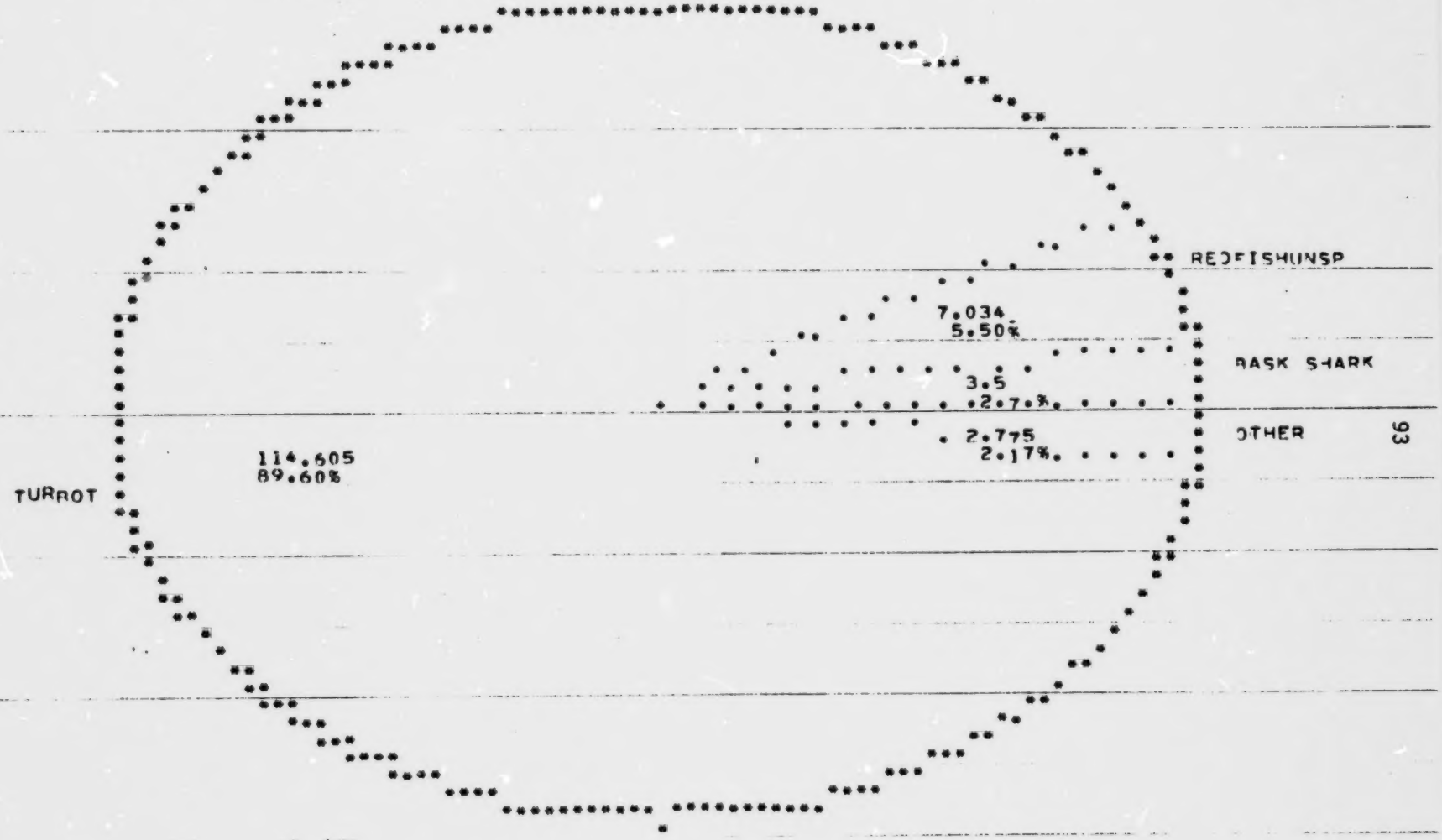


Fig. 1. SPECIES COMPOSITION.TURBOT FISHERY.1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JULY NAFO=2H UNITAREA=215

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

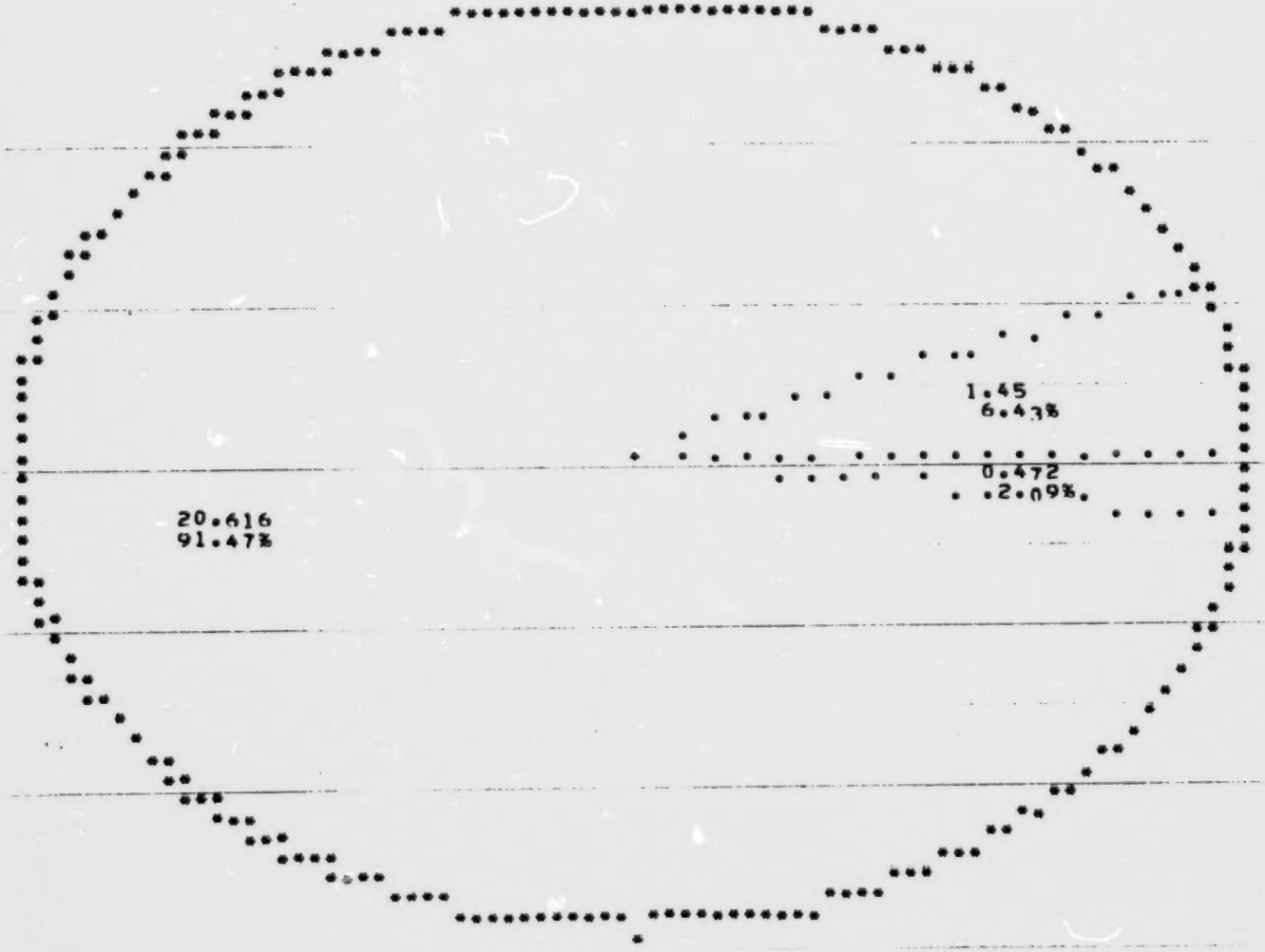


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JULY NAFO=2H UNITAREA=216

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

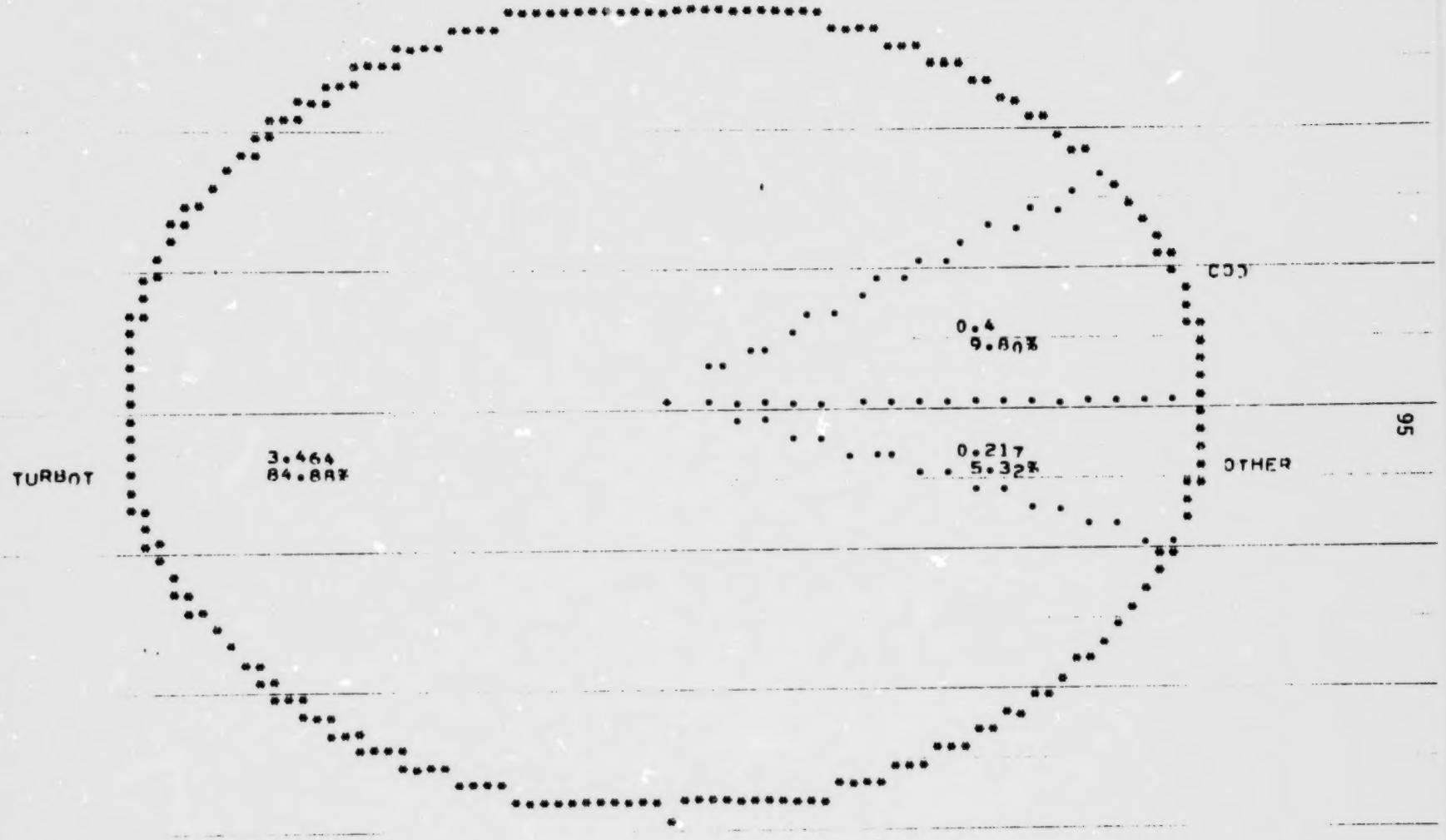


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JULY NAFO=3K UNITAREA=339

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

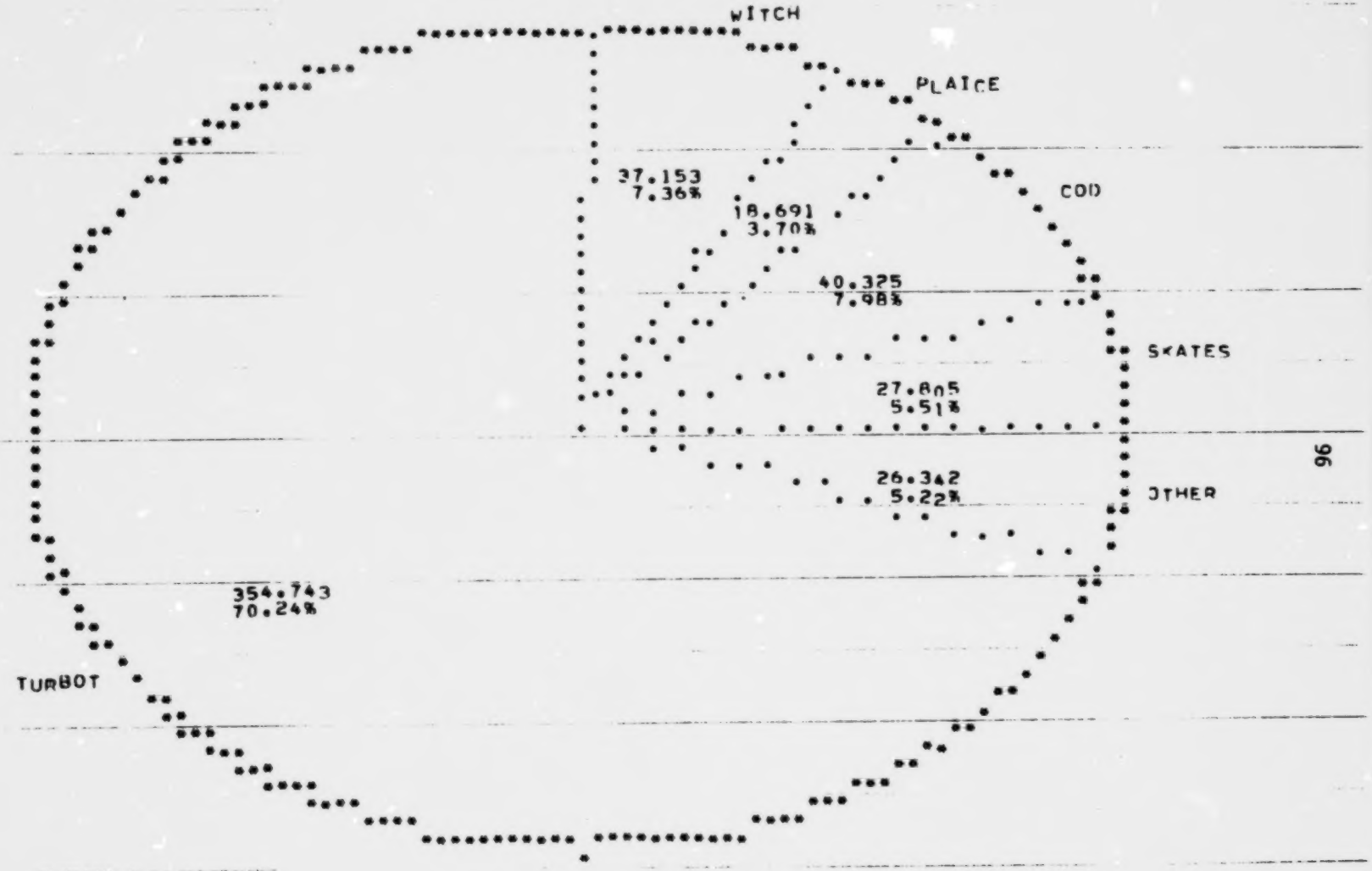


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JULY NAFO=3K UNITAREA=344

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

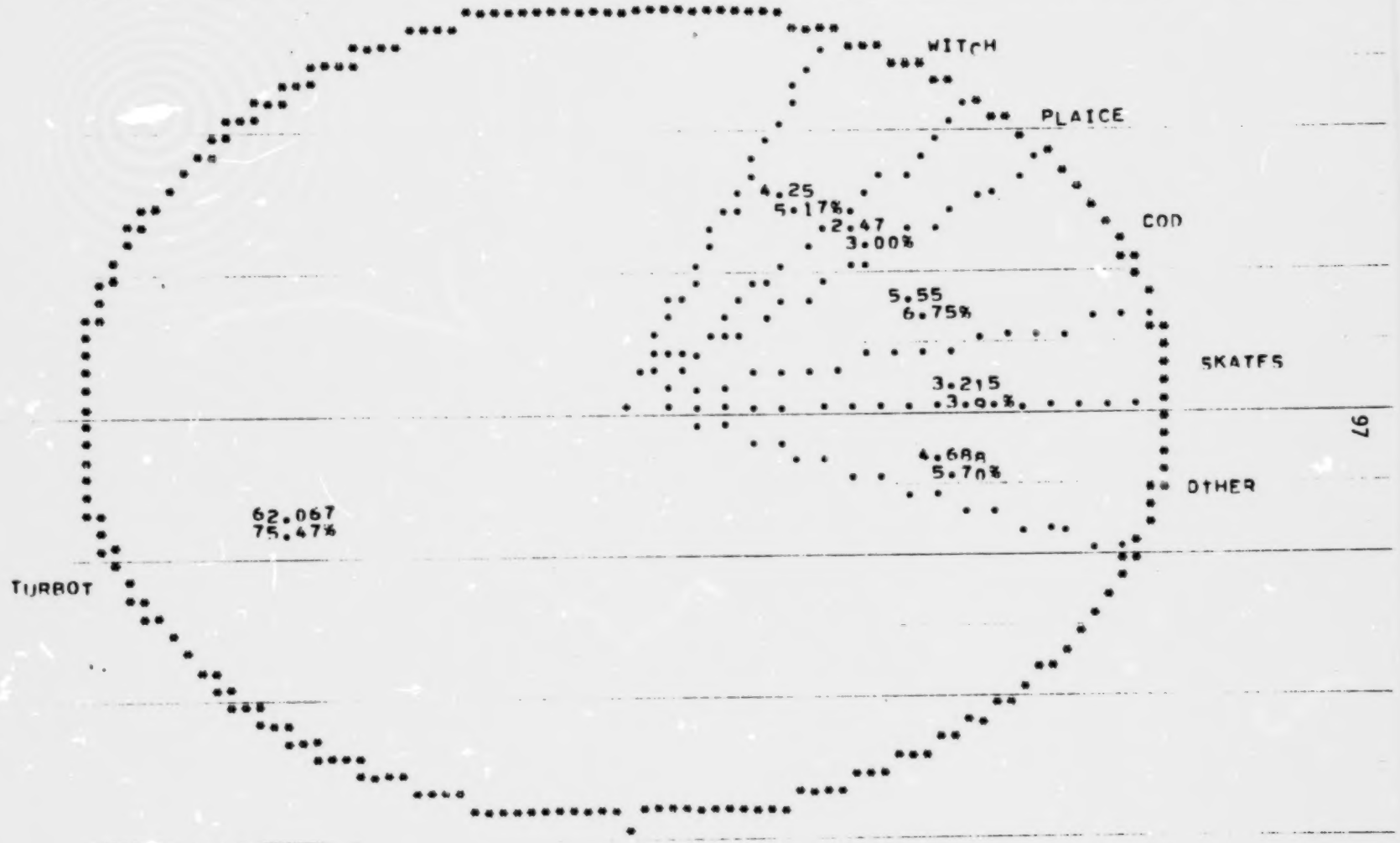


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=AUG NAFO=2H UNITAREA=212

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

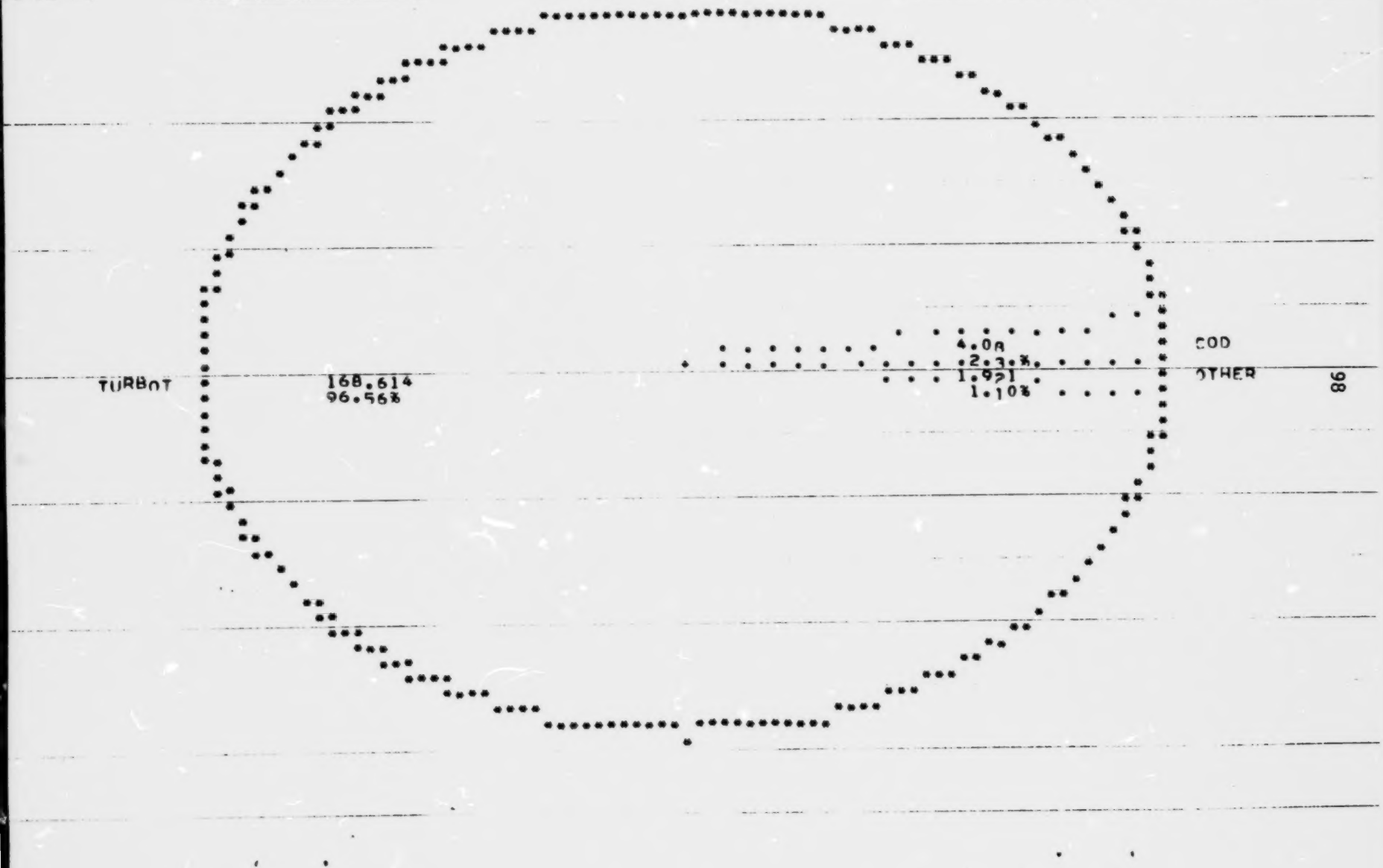


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=AUG NAFO=2H UNITAREA=213

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

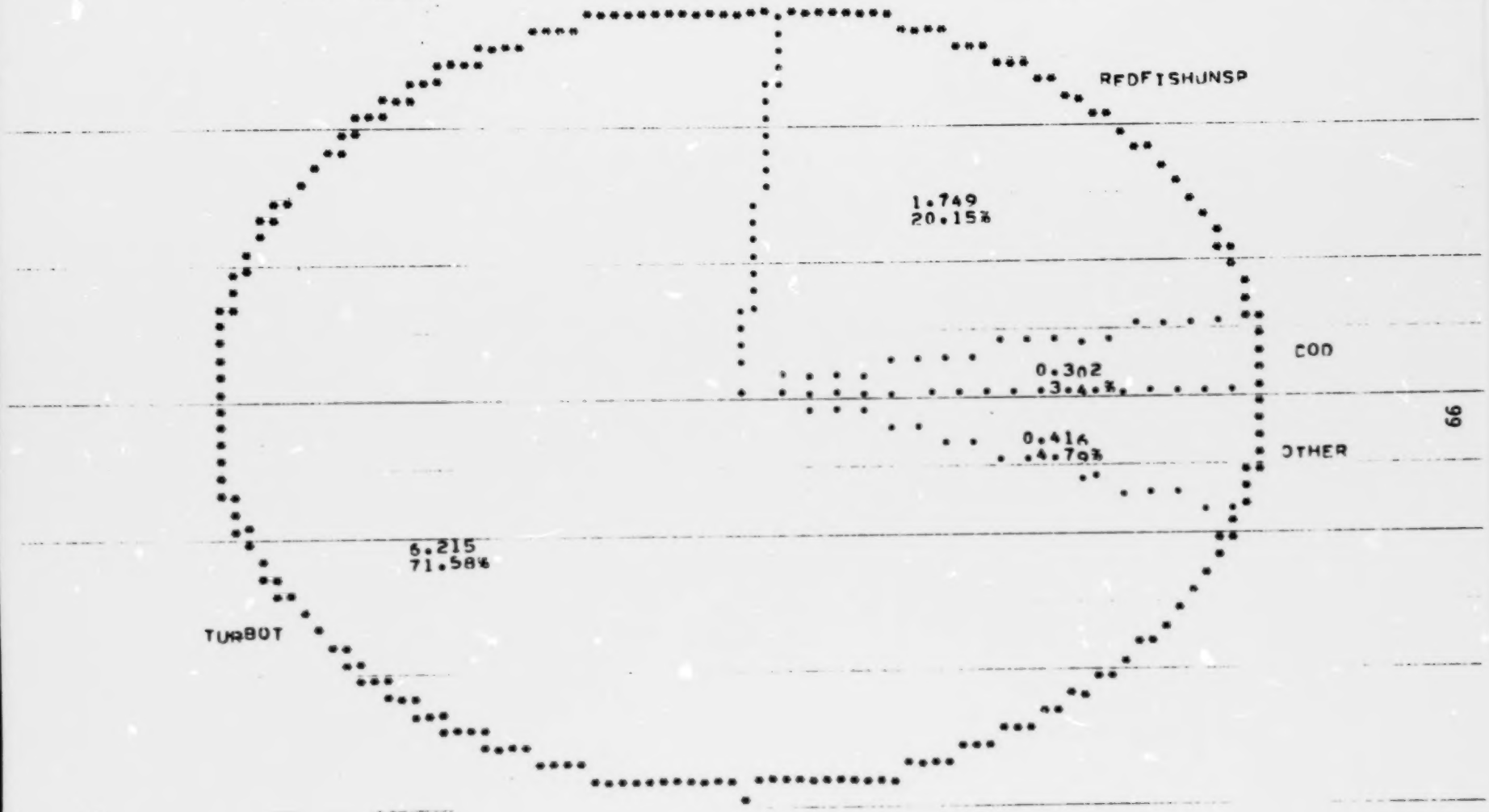


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=AUG NAFO=3K UNITAREA=339

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

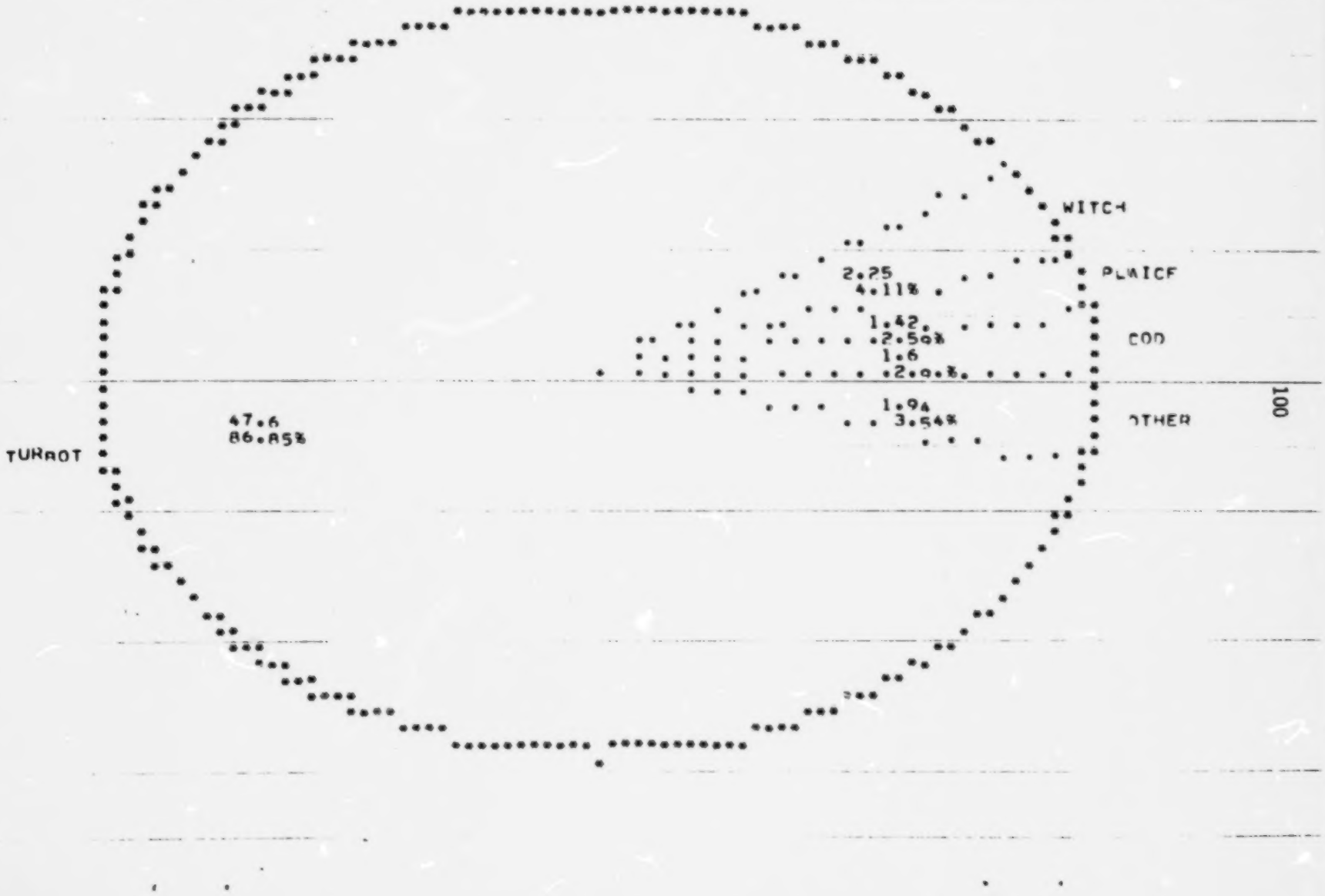


Fig. 1. SPECIES COMPOSITION.TURBOT FISHERY.1983
DIRECT=TURBOT COUNTRY=POLAND MONTH=AUG NAFO=3K UNITAREA=344
SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

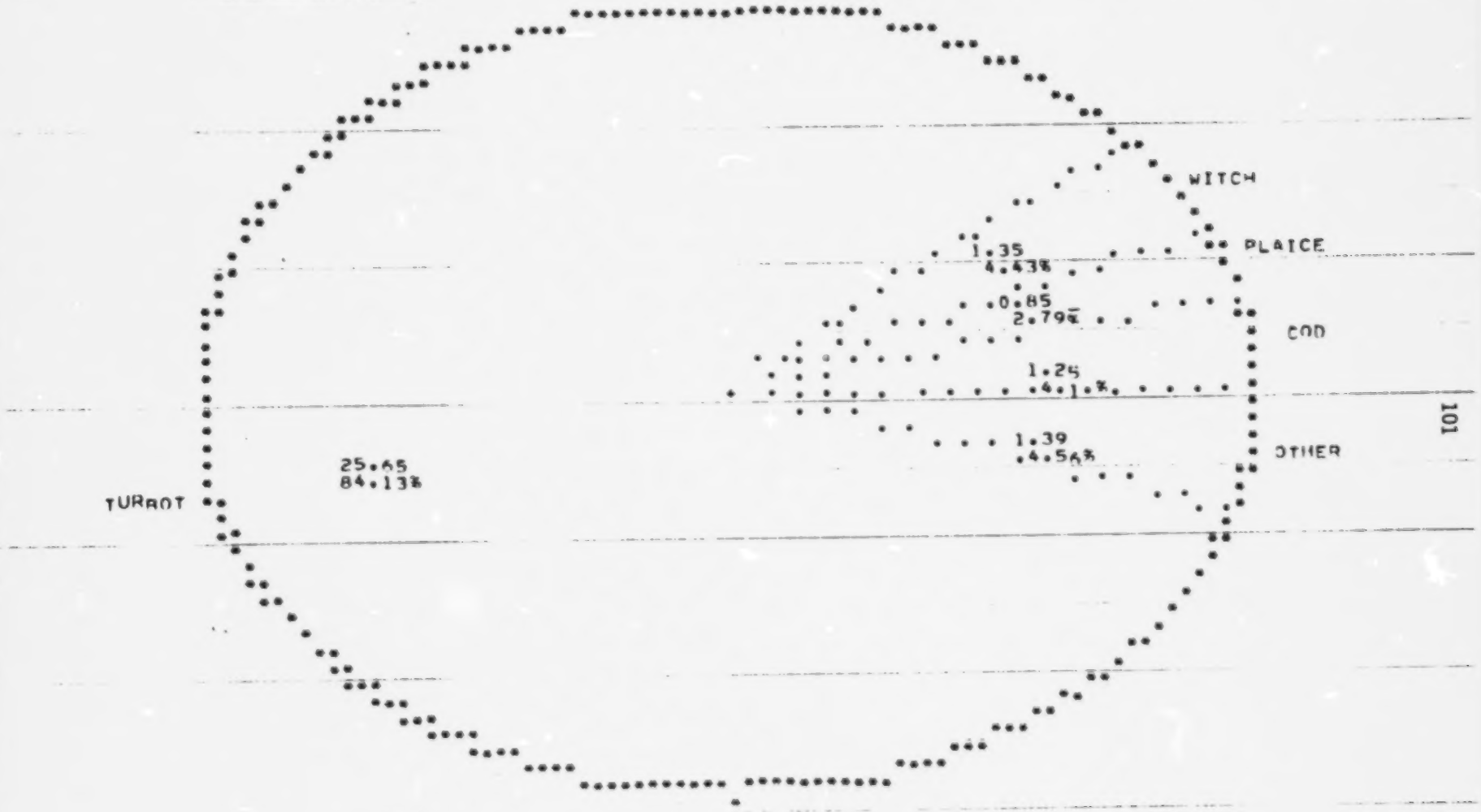


Fig. 1. SPECIES COMPOSITION.TURBOT FISHERY.1983
DIRECT=TURBOT COUNTRY=POLAND MONTH=SEPT NAFO=3K UNITAREA=339
SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

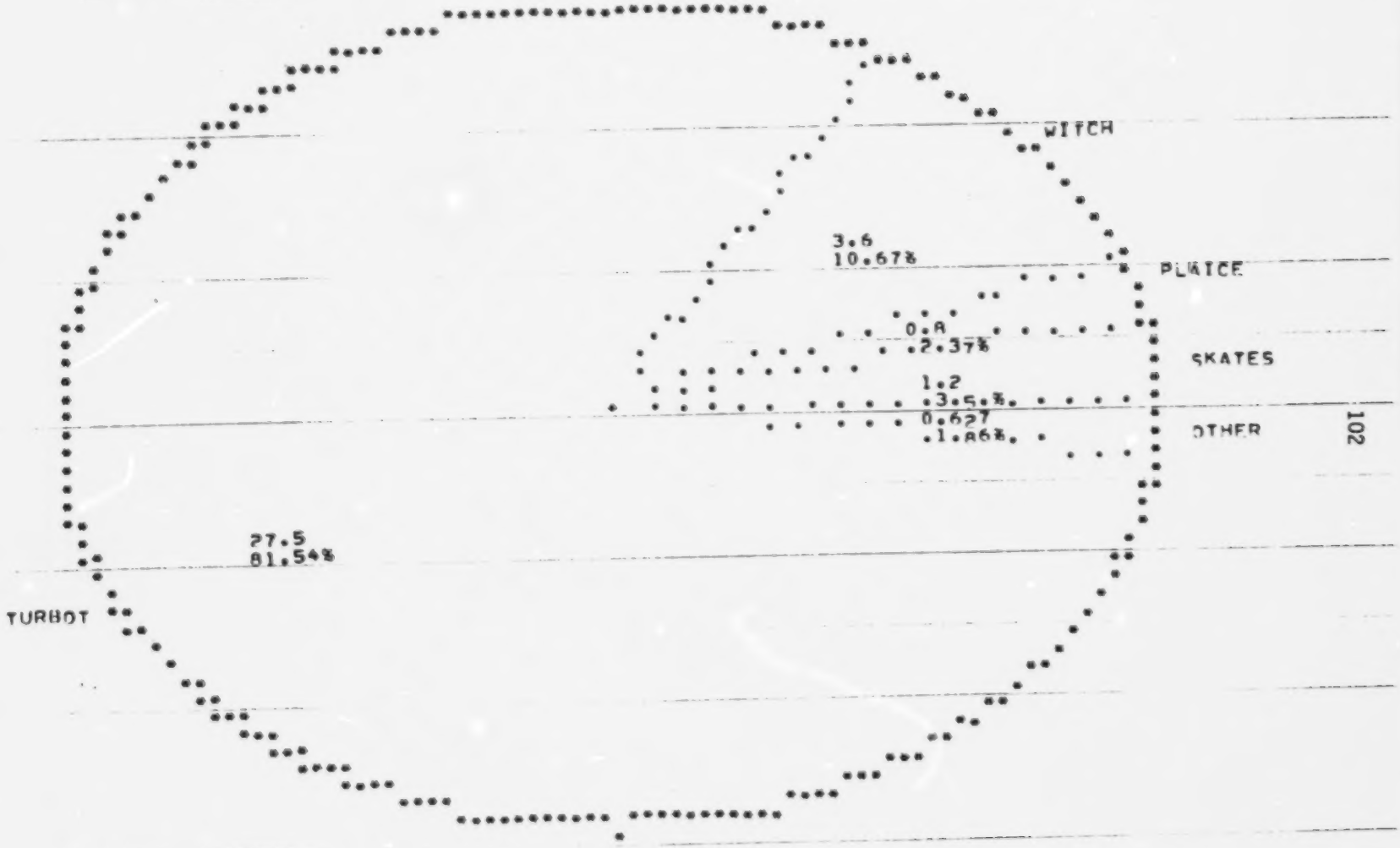


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=2J UNITAREA=202

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

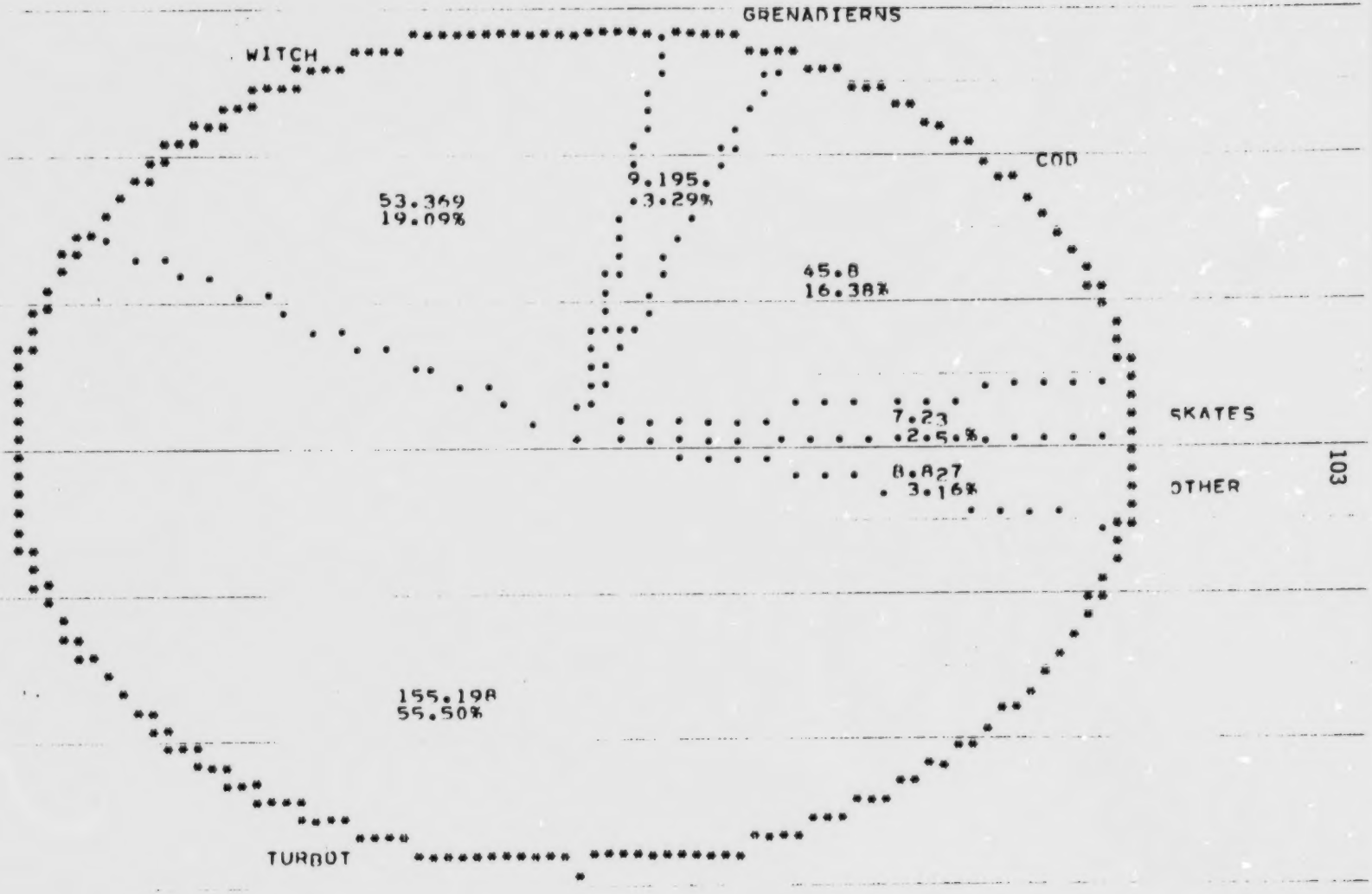


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=2J UNITAREA=203

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

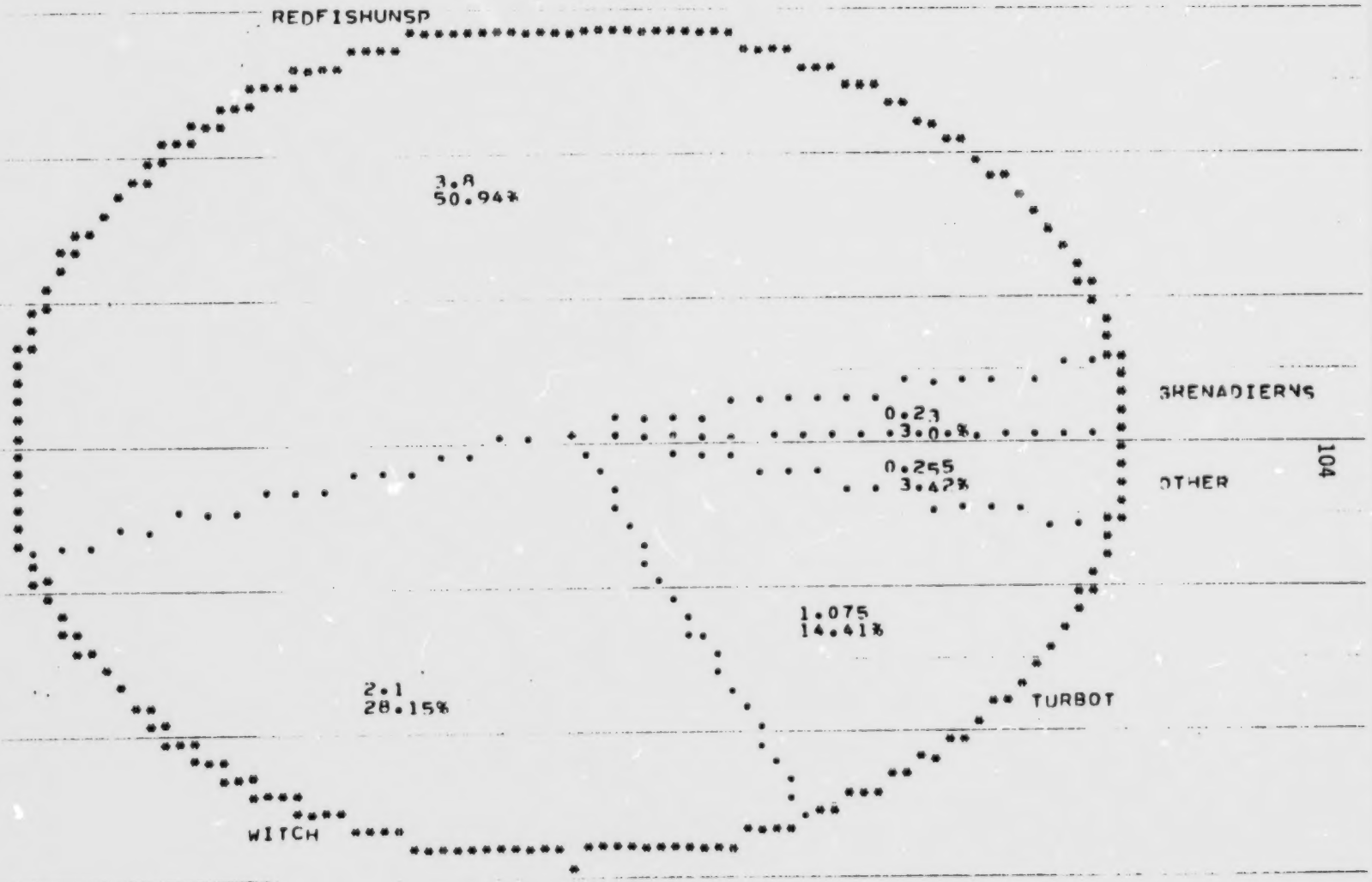


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=2J UNITAREA=204

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

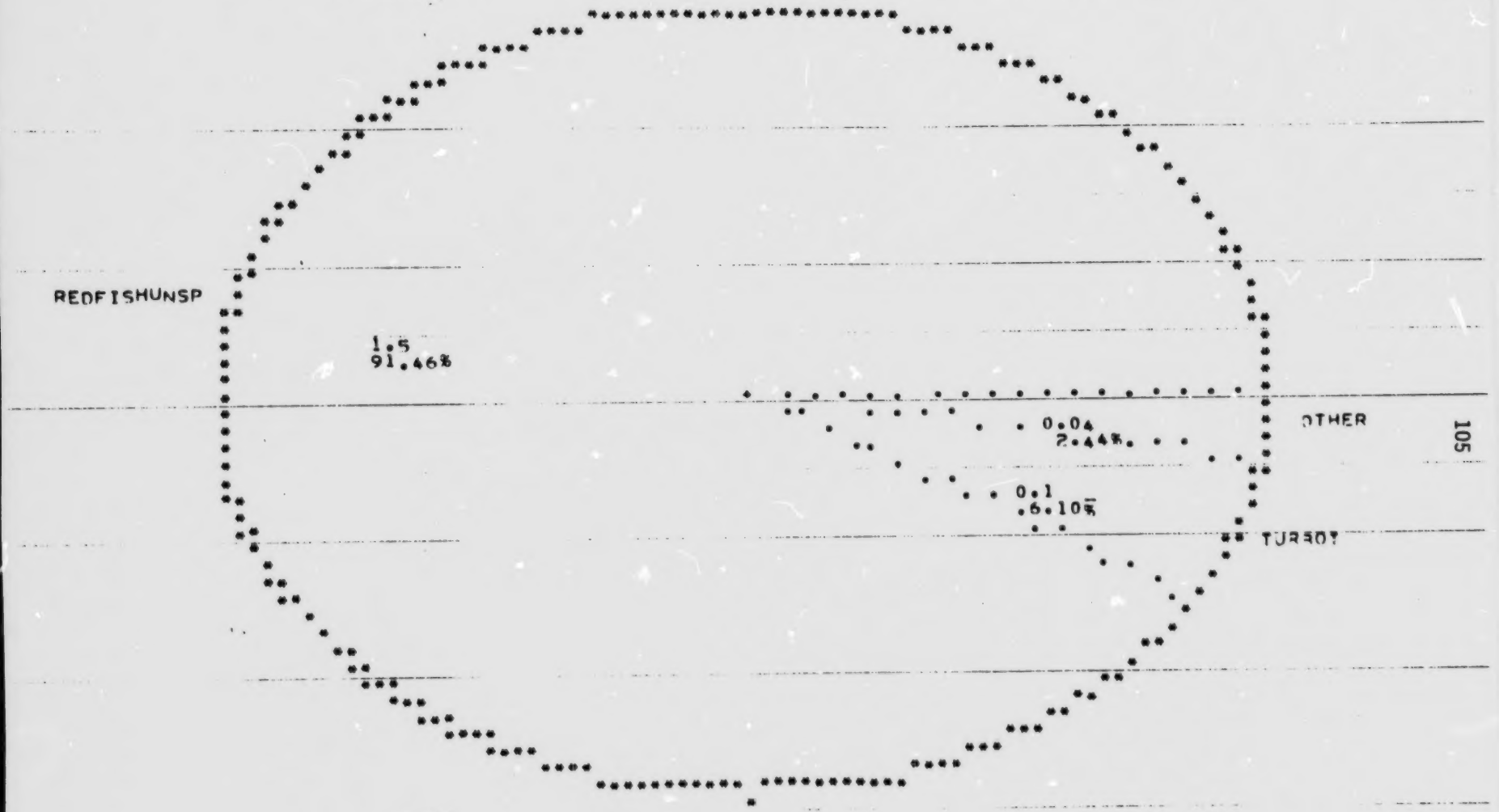


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=2J UNITAREA=206

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

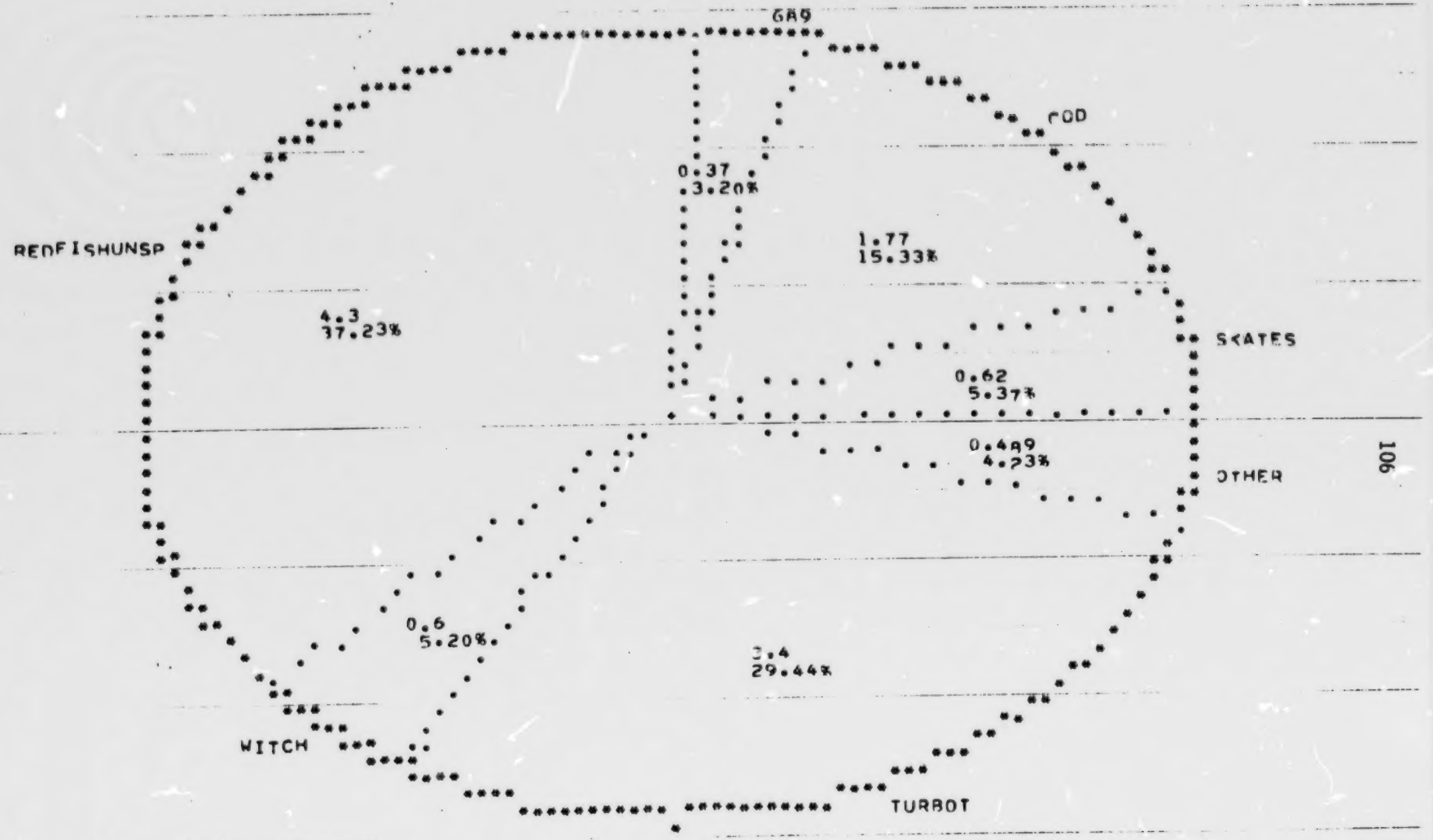


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=2J UNITAREA=207

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

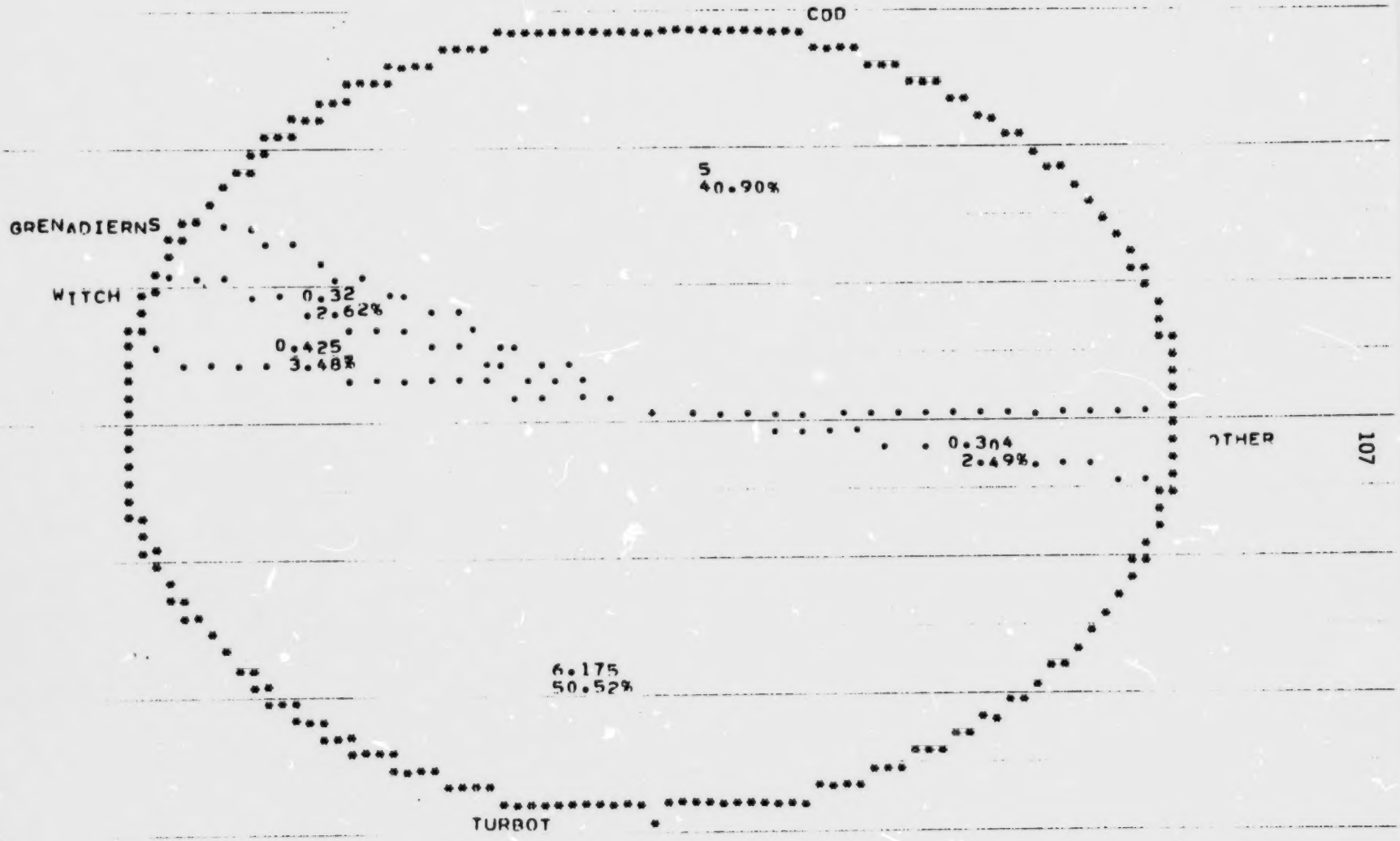


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=3K UNITAREA=337

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

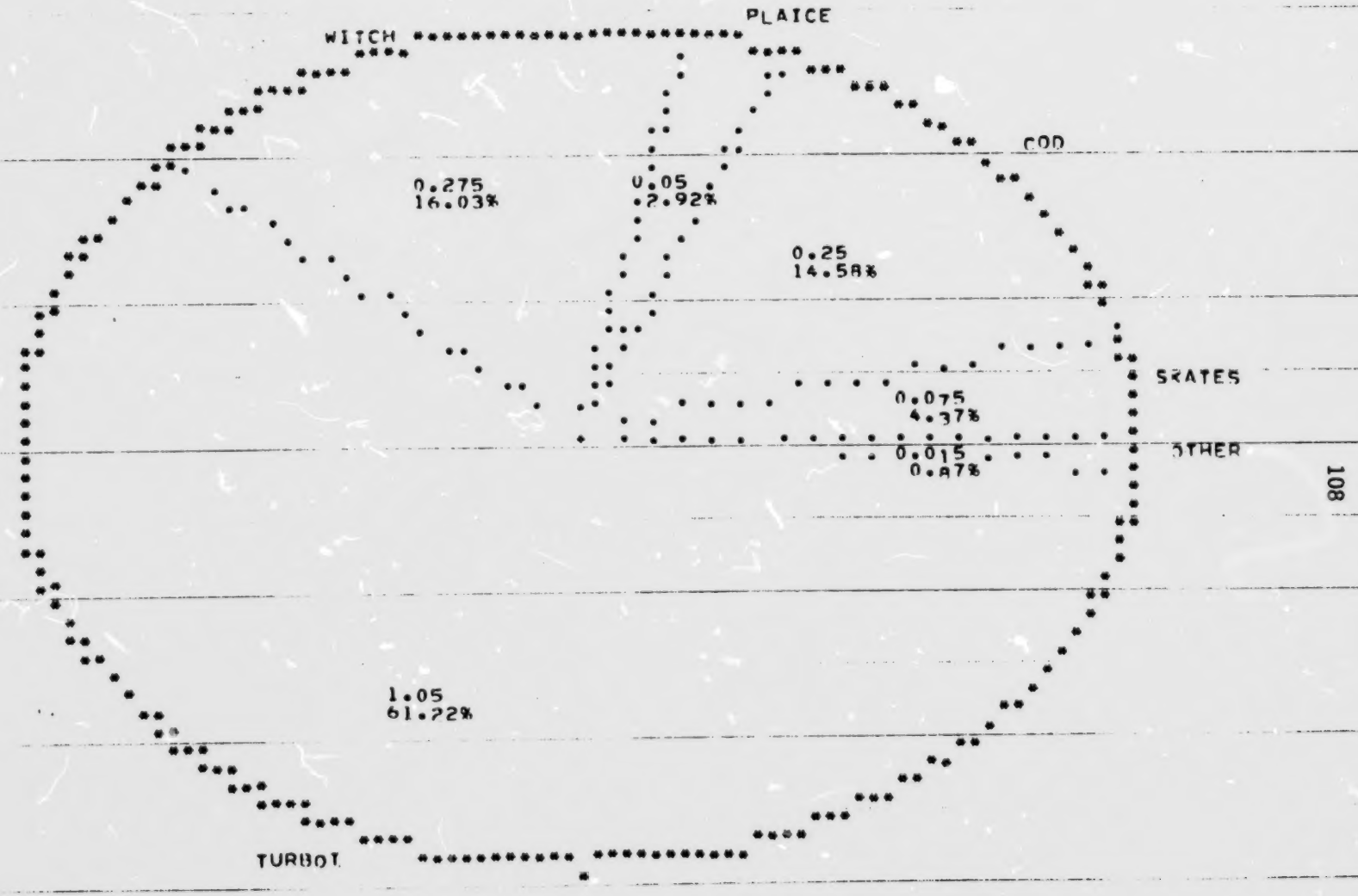


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=3K UNITAREA=330

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

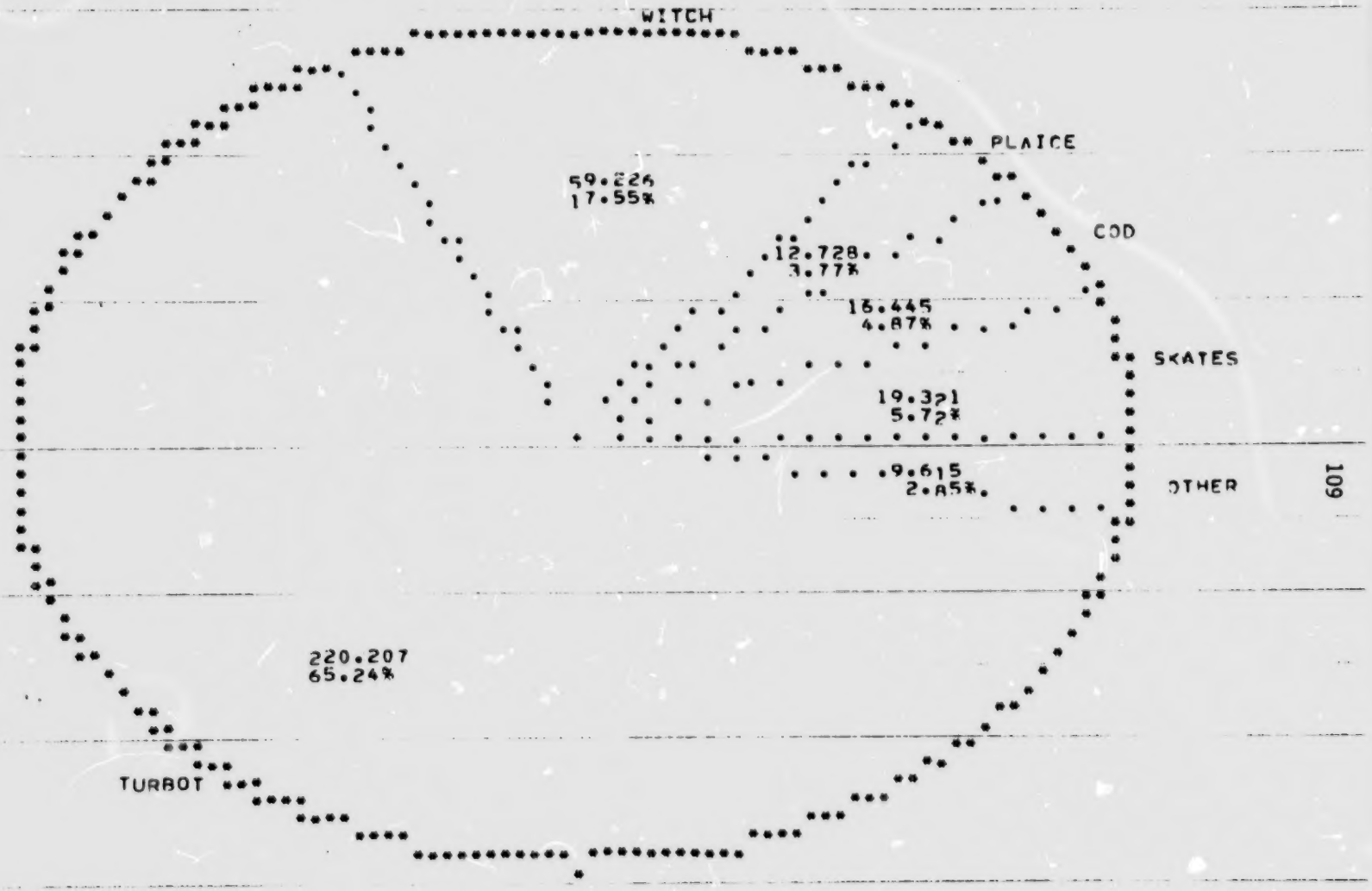


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=3K UNITAREA=343

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

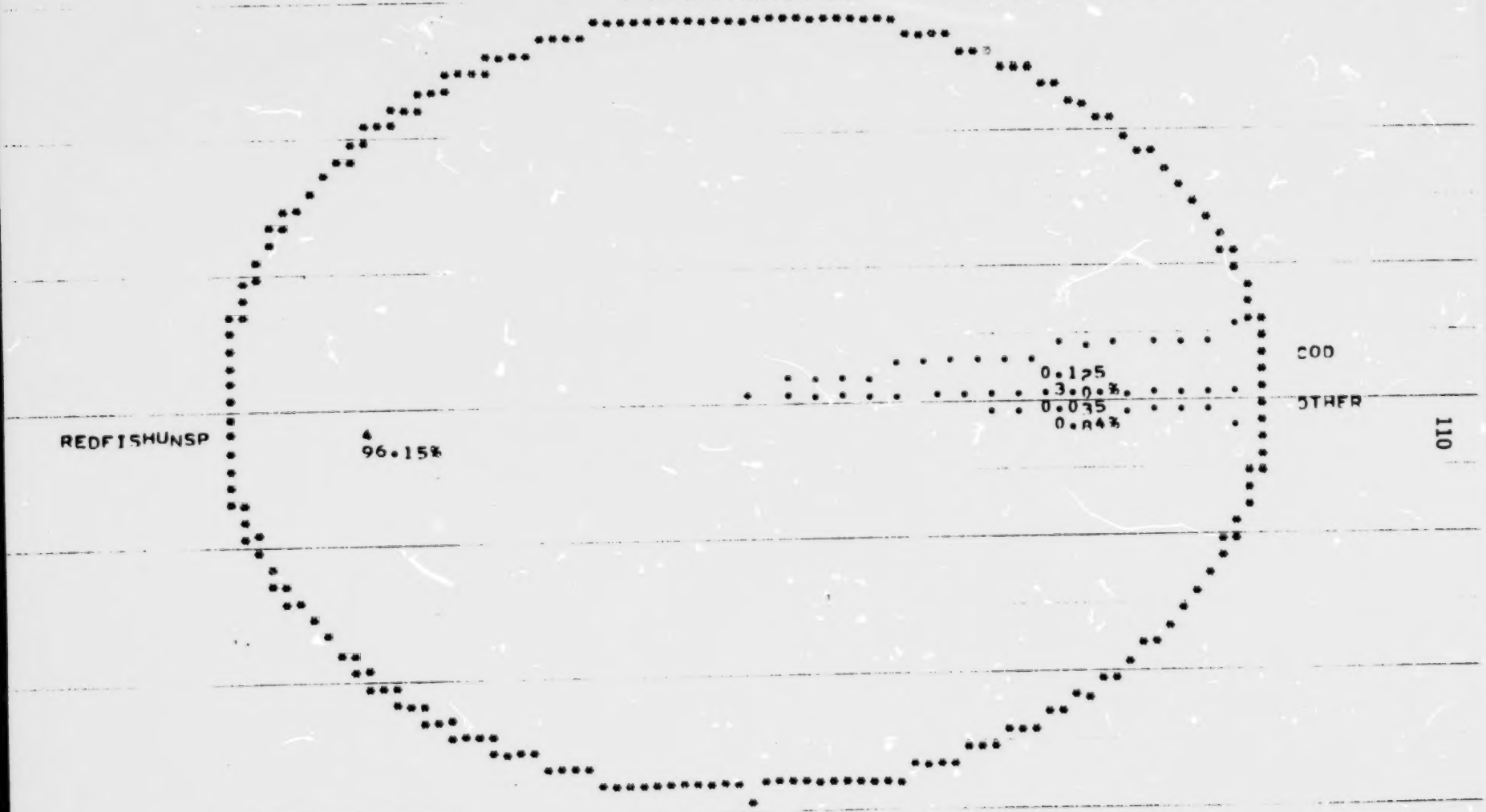


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=3K UNITAREA=344

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

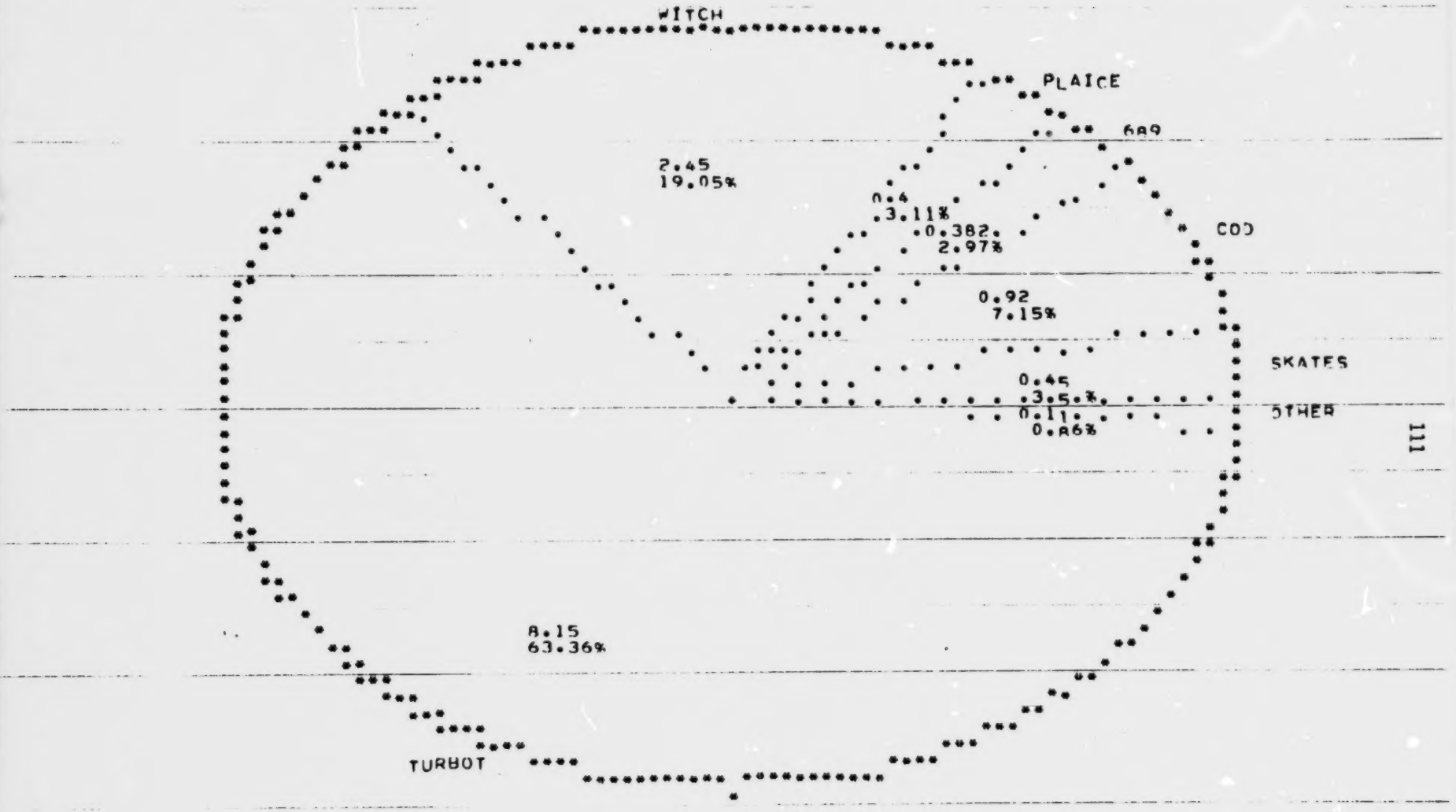


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2J UNITAREA=202

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

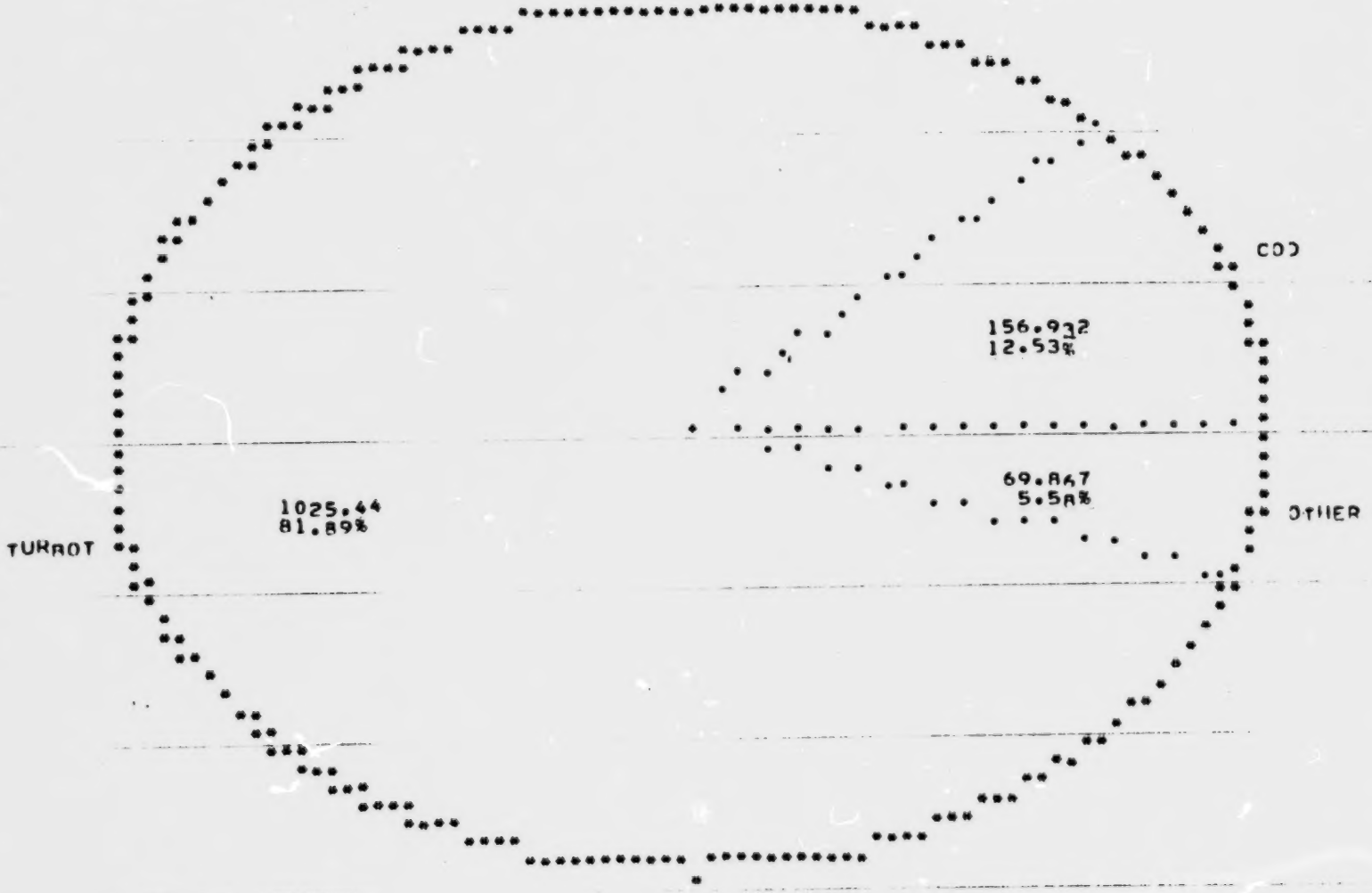


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2J UNITAREA=203

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

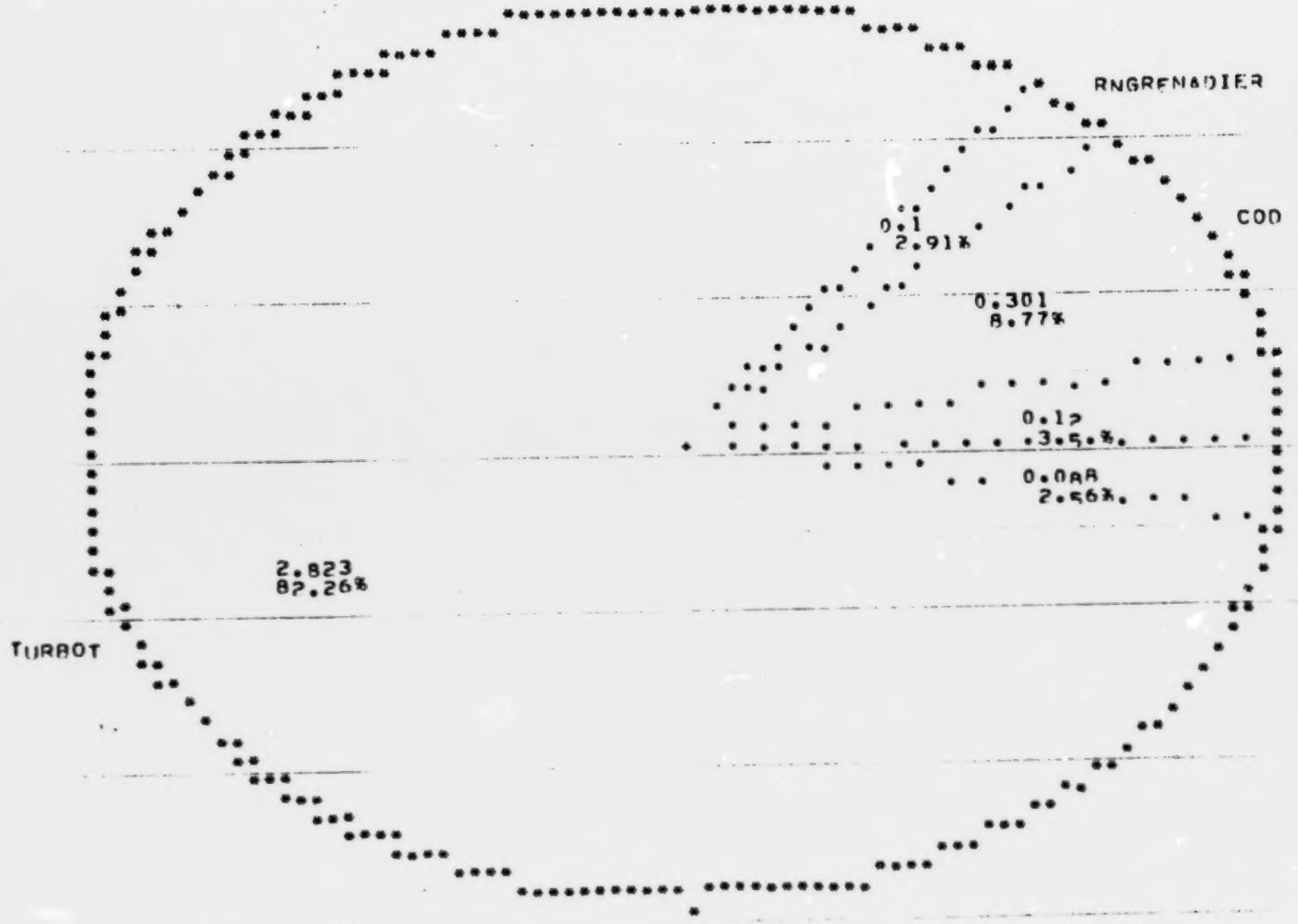


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2J UNITAREA=207

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

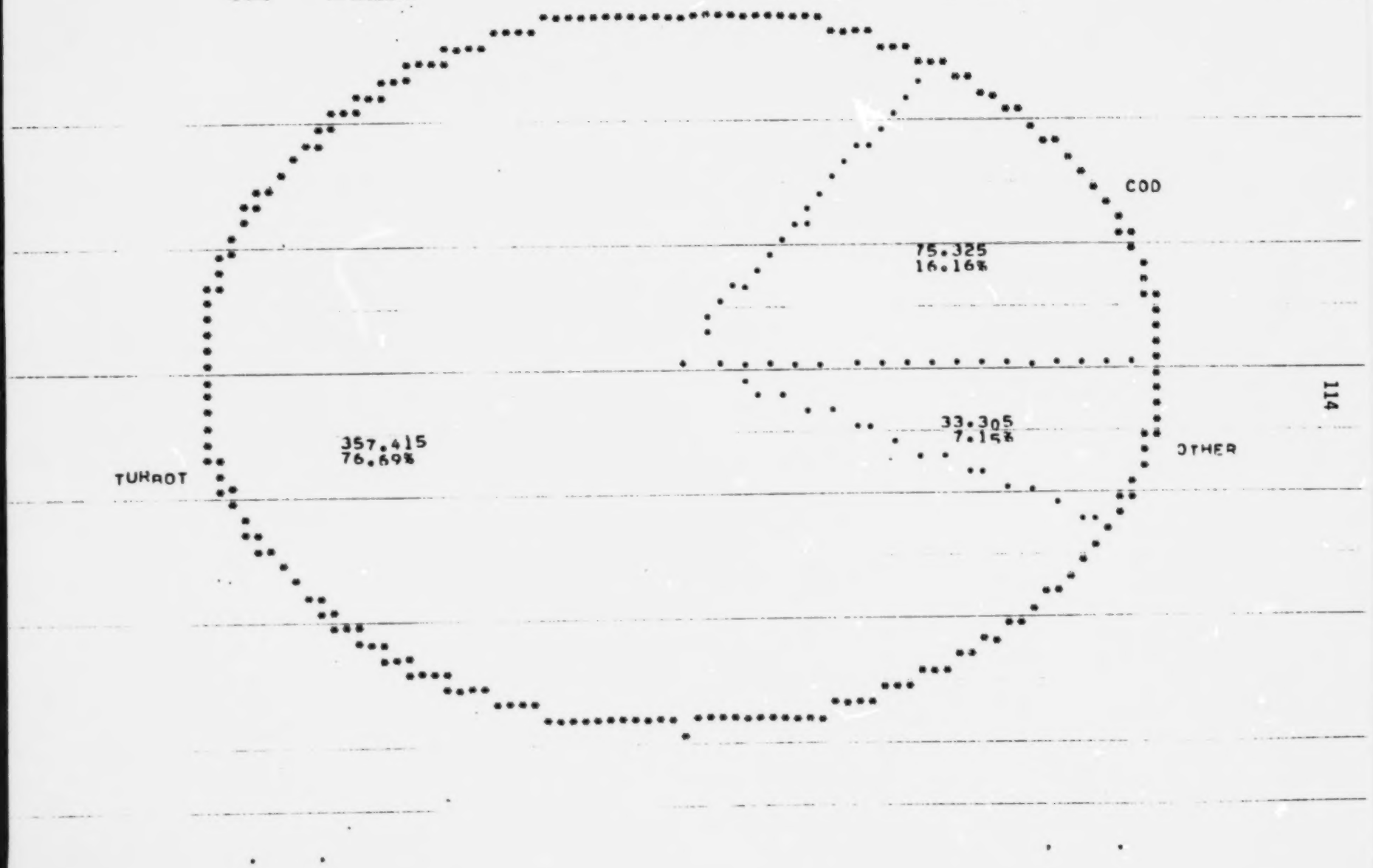


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2J UNITAREA=210

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

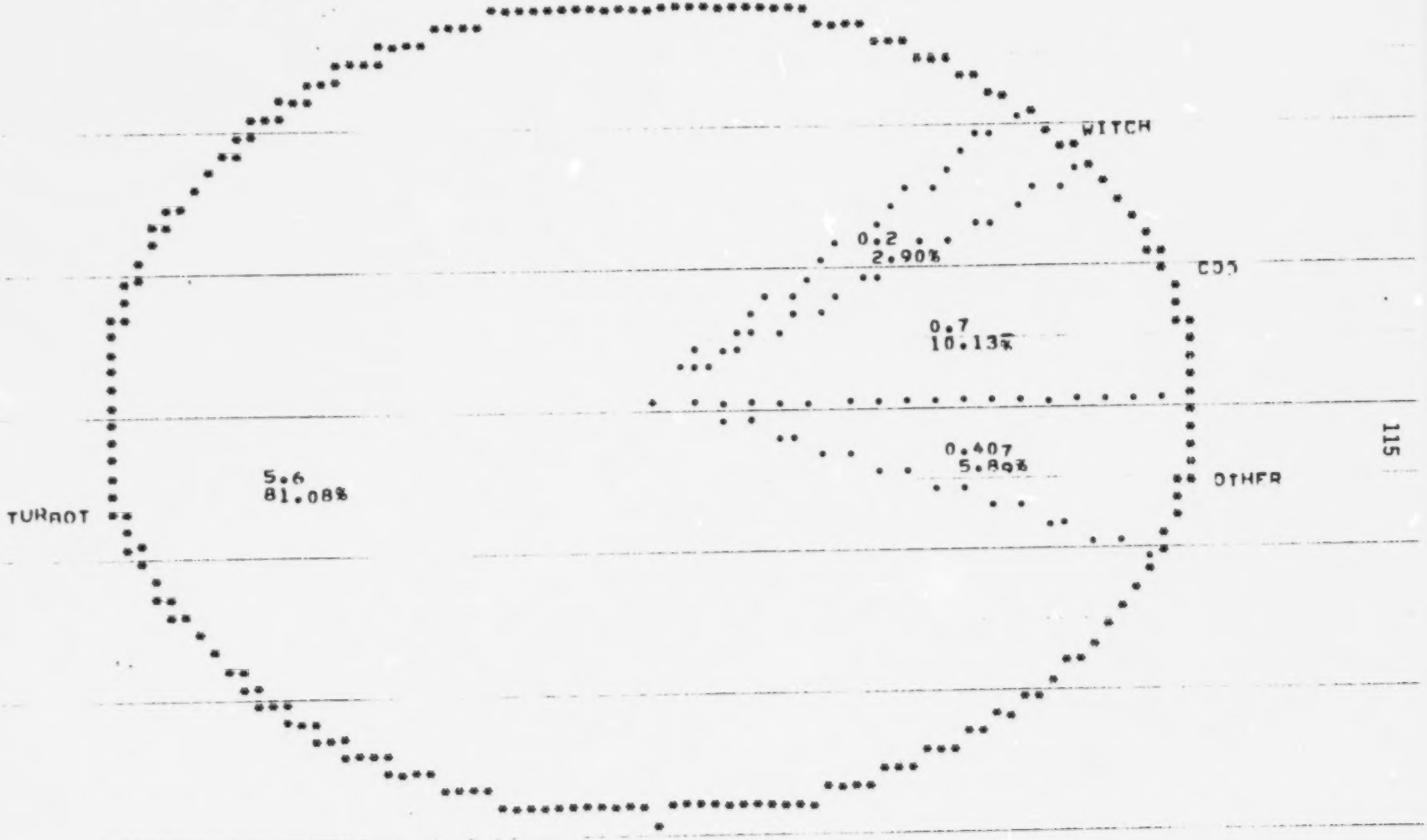


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=DEC NAFO=2H UNITAREA=212

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

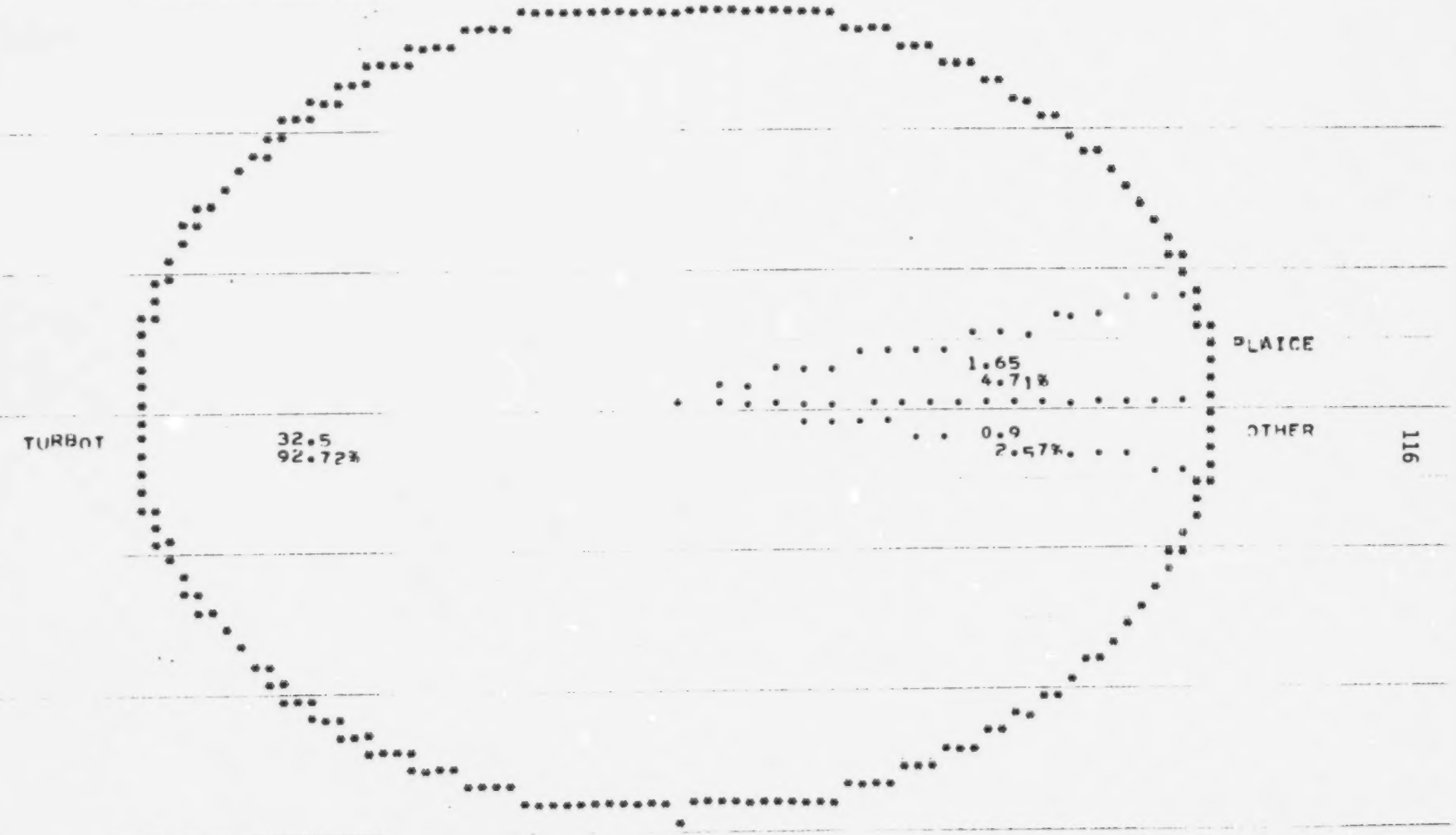


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=DEC NAFO=2H UNITAREA=213

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

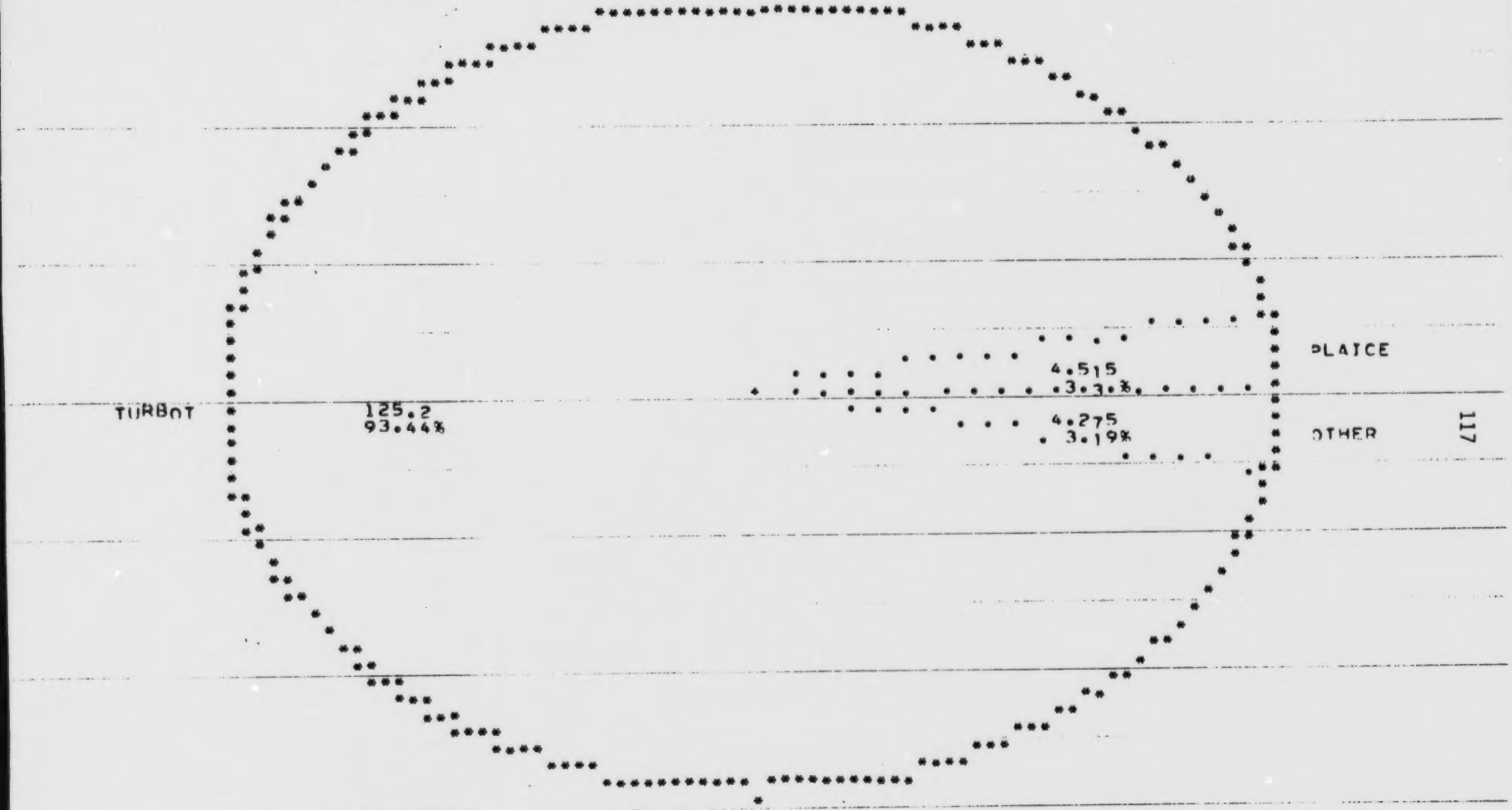


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=USSR MONTH=AUG NAFO=0 UNITAREA=.

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

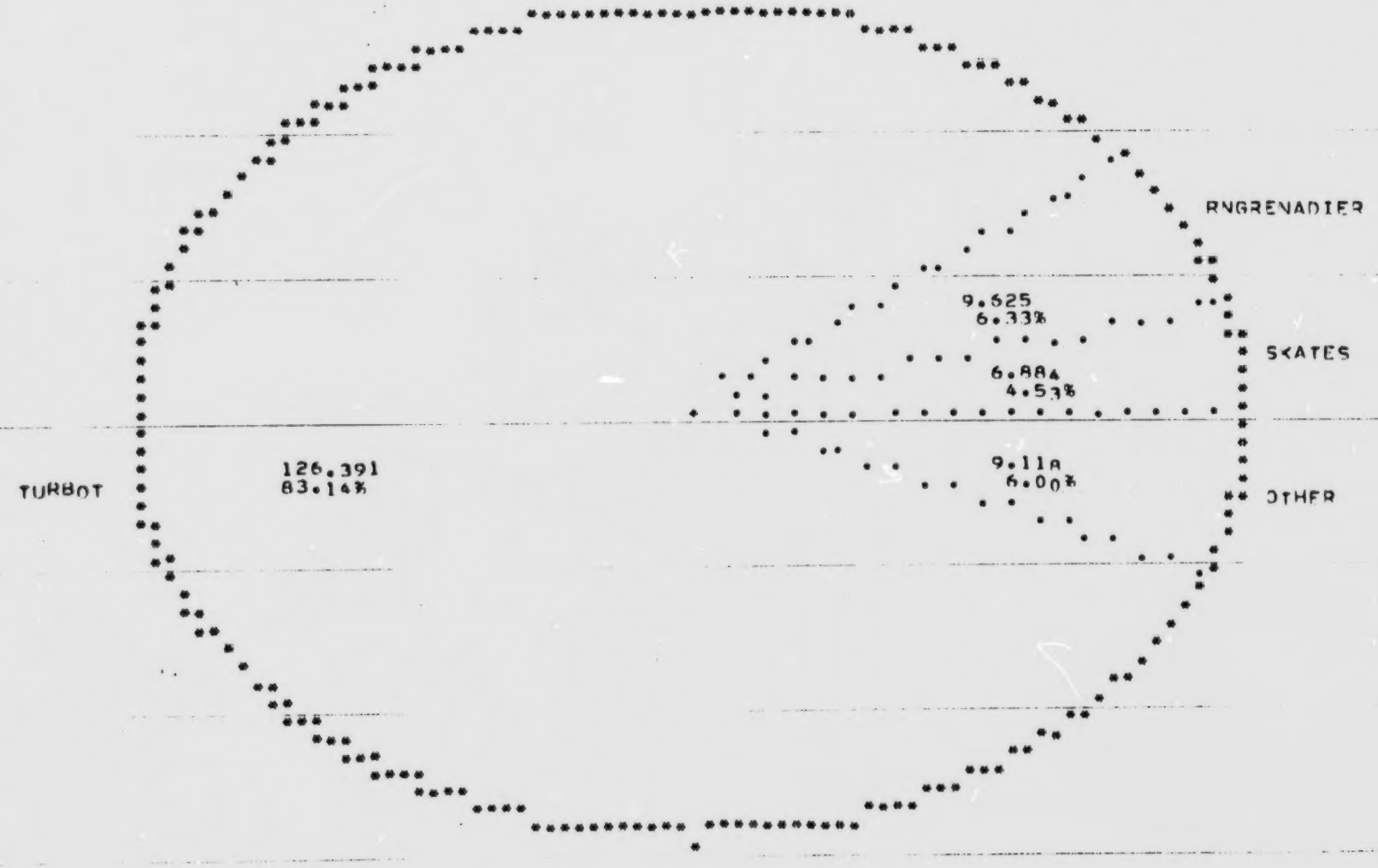


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983

DIRECT=TURBOT COUNTRY=USSR MONTH=SEPT NAFO=0 UNITAREA=.

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

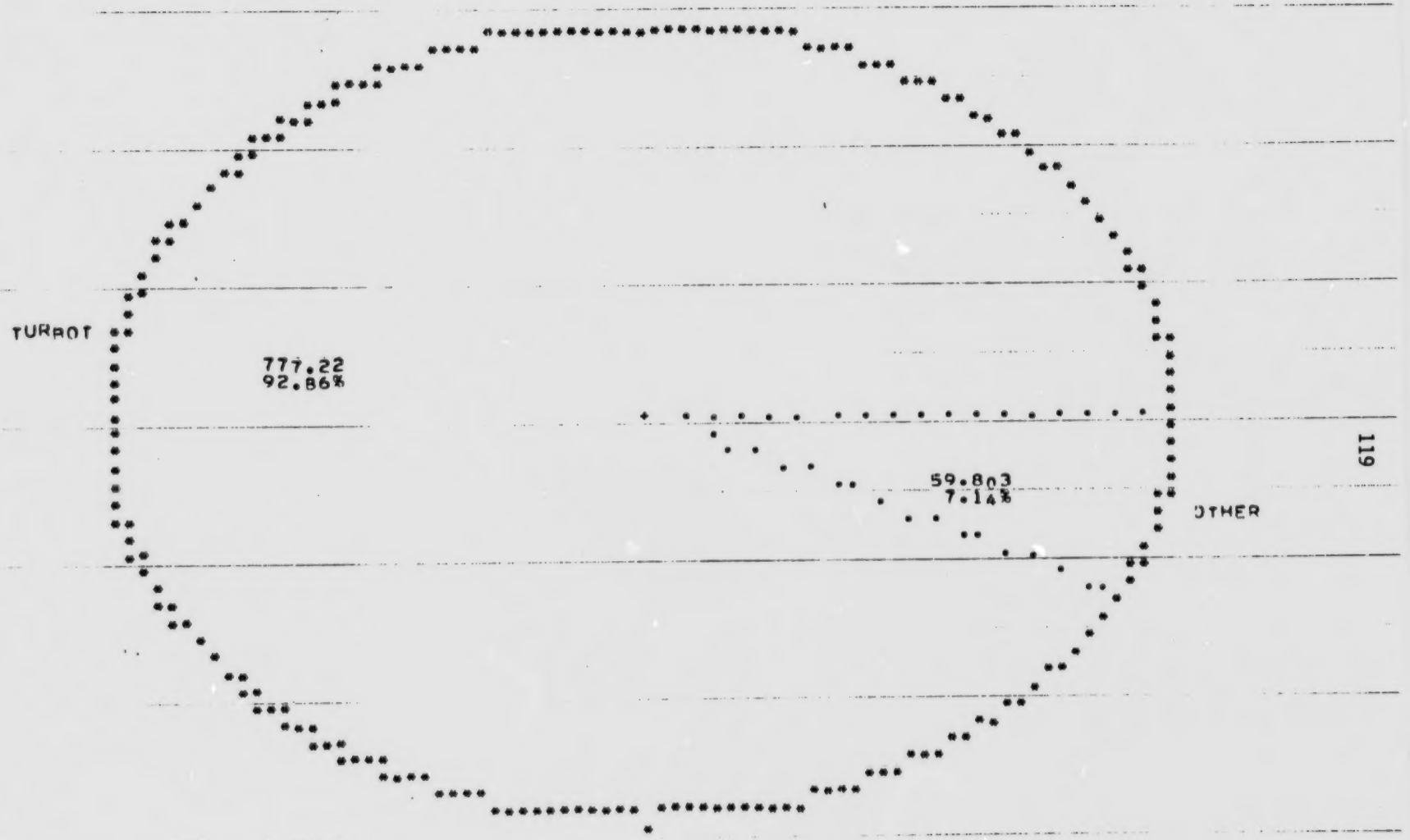


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=USSR MONTH=OCT NAFO=0 UNITAREA=*

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

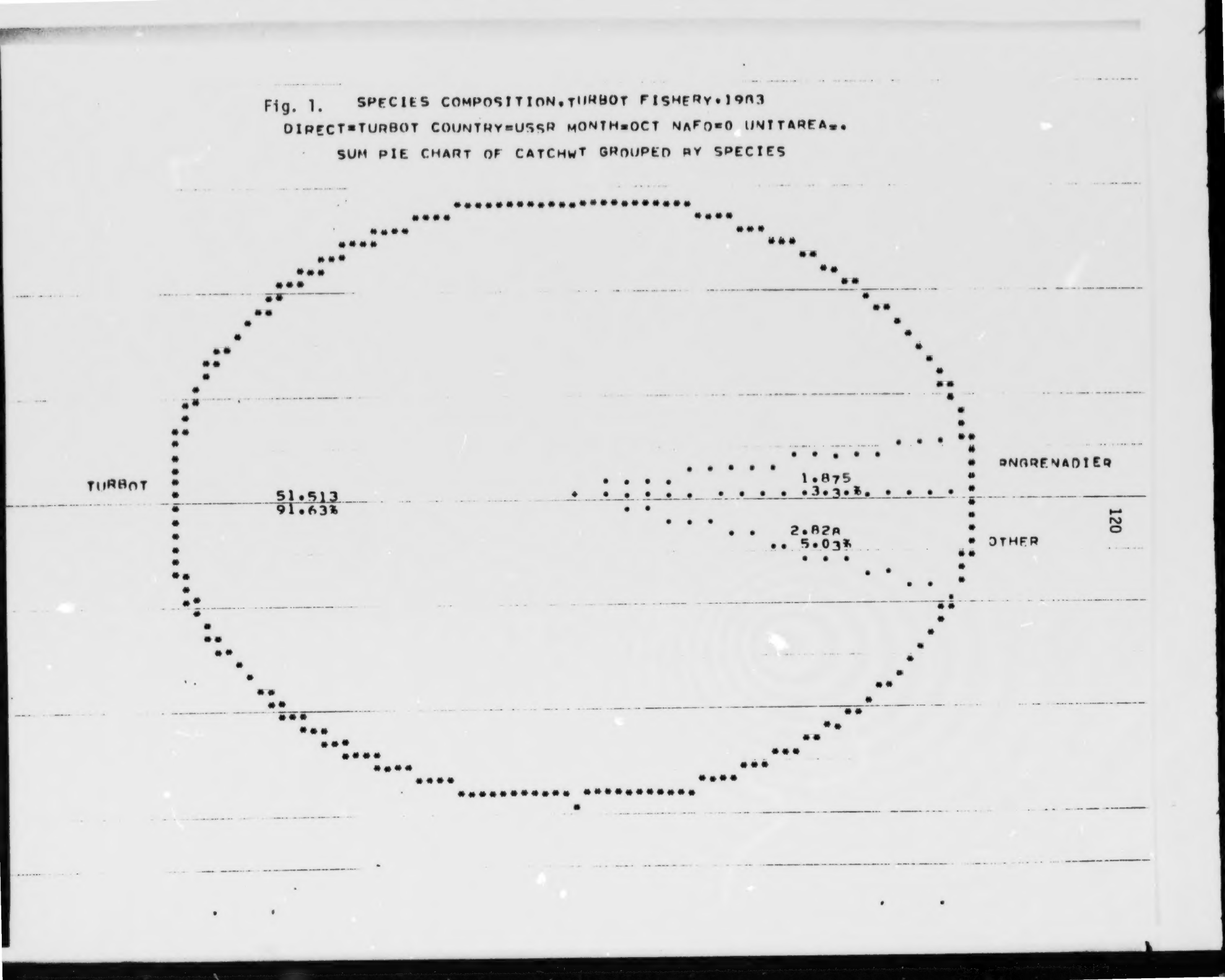


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983

DIRECT=TURBOT COUNTRY=USSR MONTH=DEC NAFO=?G UNITAREA=?19

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

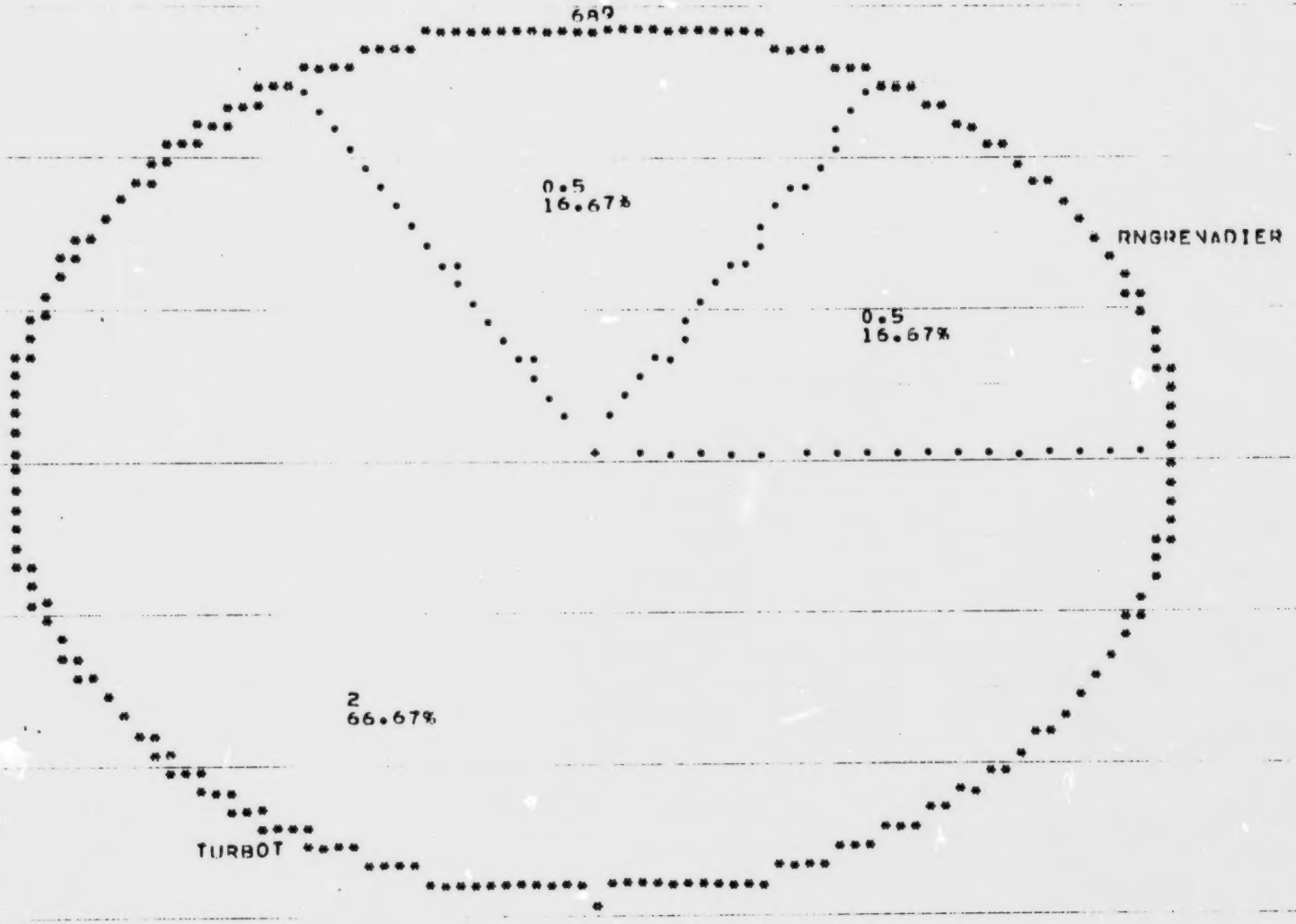


Fig. 1. SPECIES COMPOSITION,TURBOT FISHERY,1983

DIRECT=TURBOT COUNTRY=USSR MONTH=DEC NAFO=2H UNITAREA=213

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

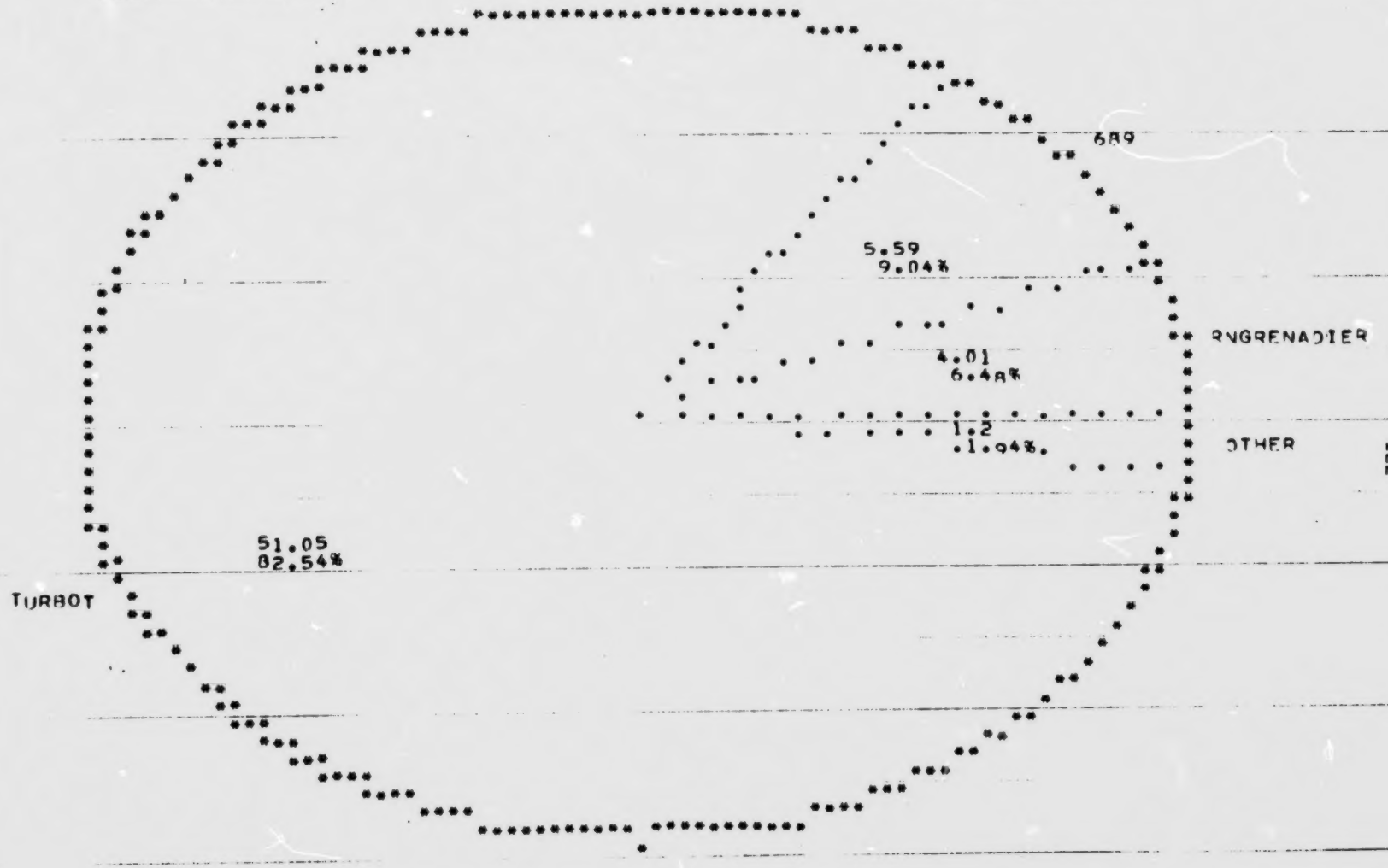


Fig. 1. SPECIES COMPOSITION, TURBOT FISHERY, 1983

DIRECT=TURBOT COUNTRY=USSR MONTH=DEC NAFO=2H UNITAREA=216

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

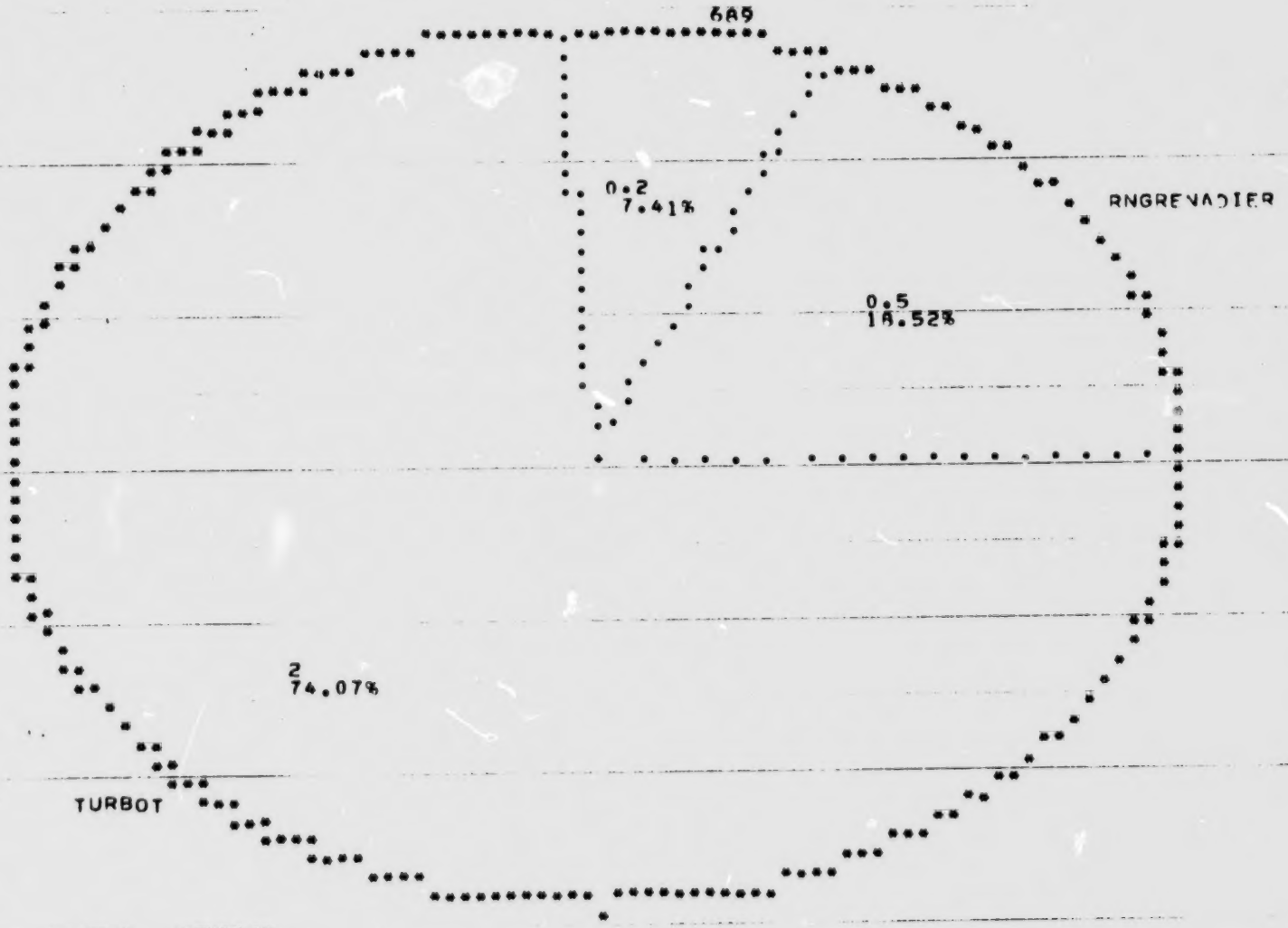


Fig. 1.SPECIES COMPOSITION,GILLNET TURBOT FISHERY,1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2J UNITAREA=202

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

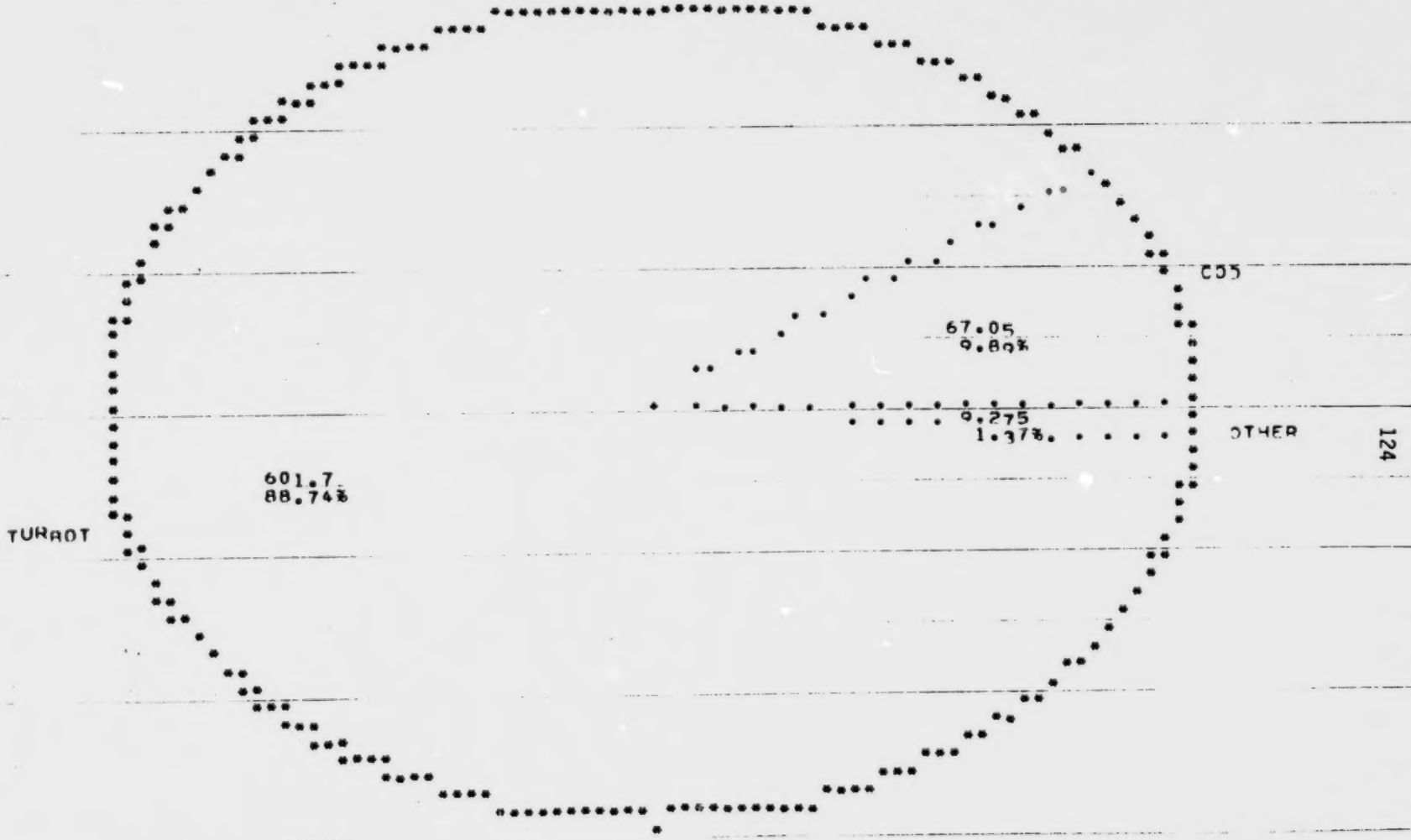


Fig. 1. SPECIES COMPOSITION,GILLNET TURBOT FISHERY,1983
DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=OCT NAFO=2J UNITAREA=202
SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

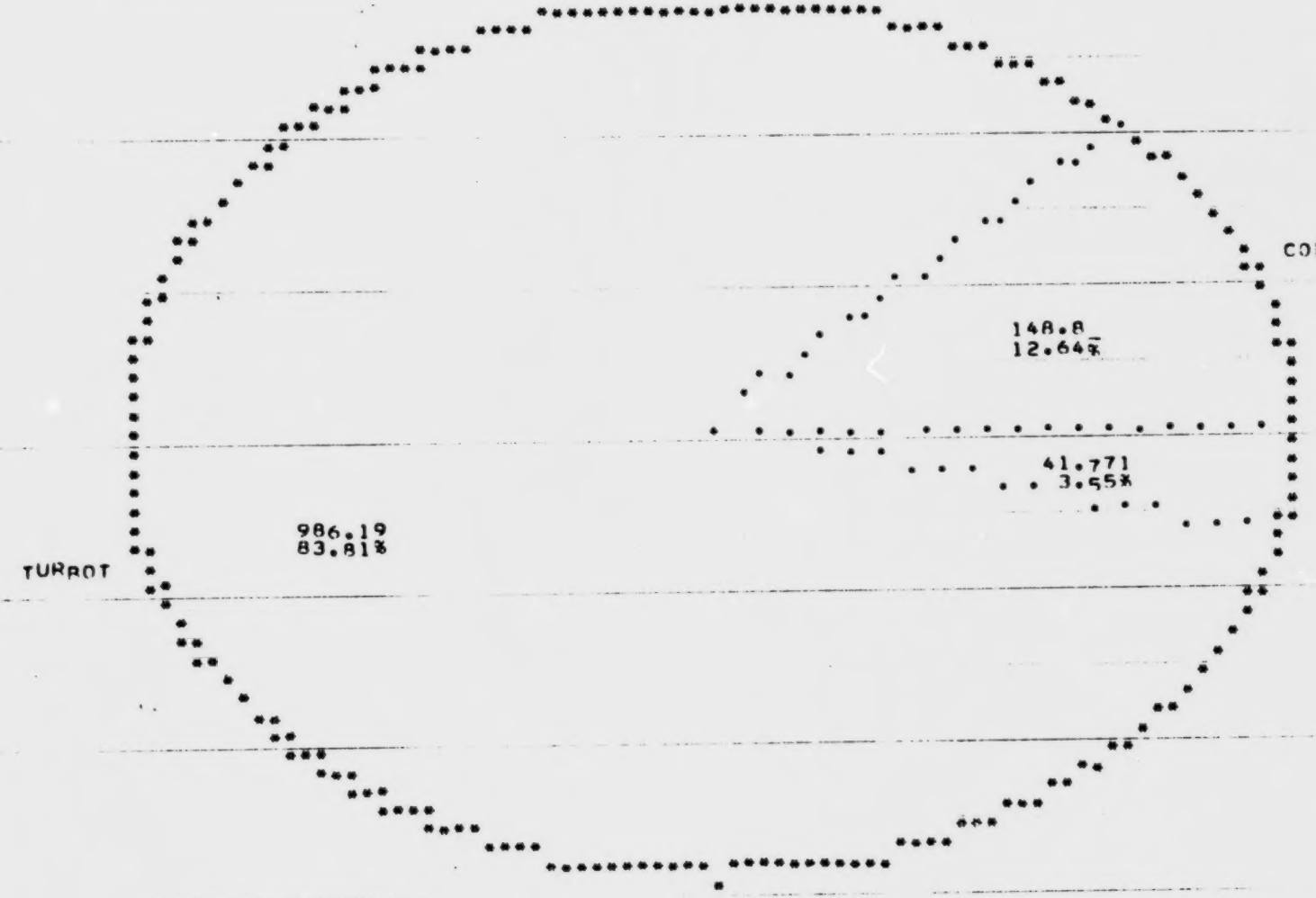


Fig. 1. SPECIES COMPOSITION,GILLNET TURBOT FISHERY,1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=NOV NAFO=2J UNITAREA=202

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

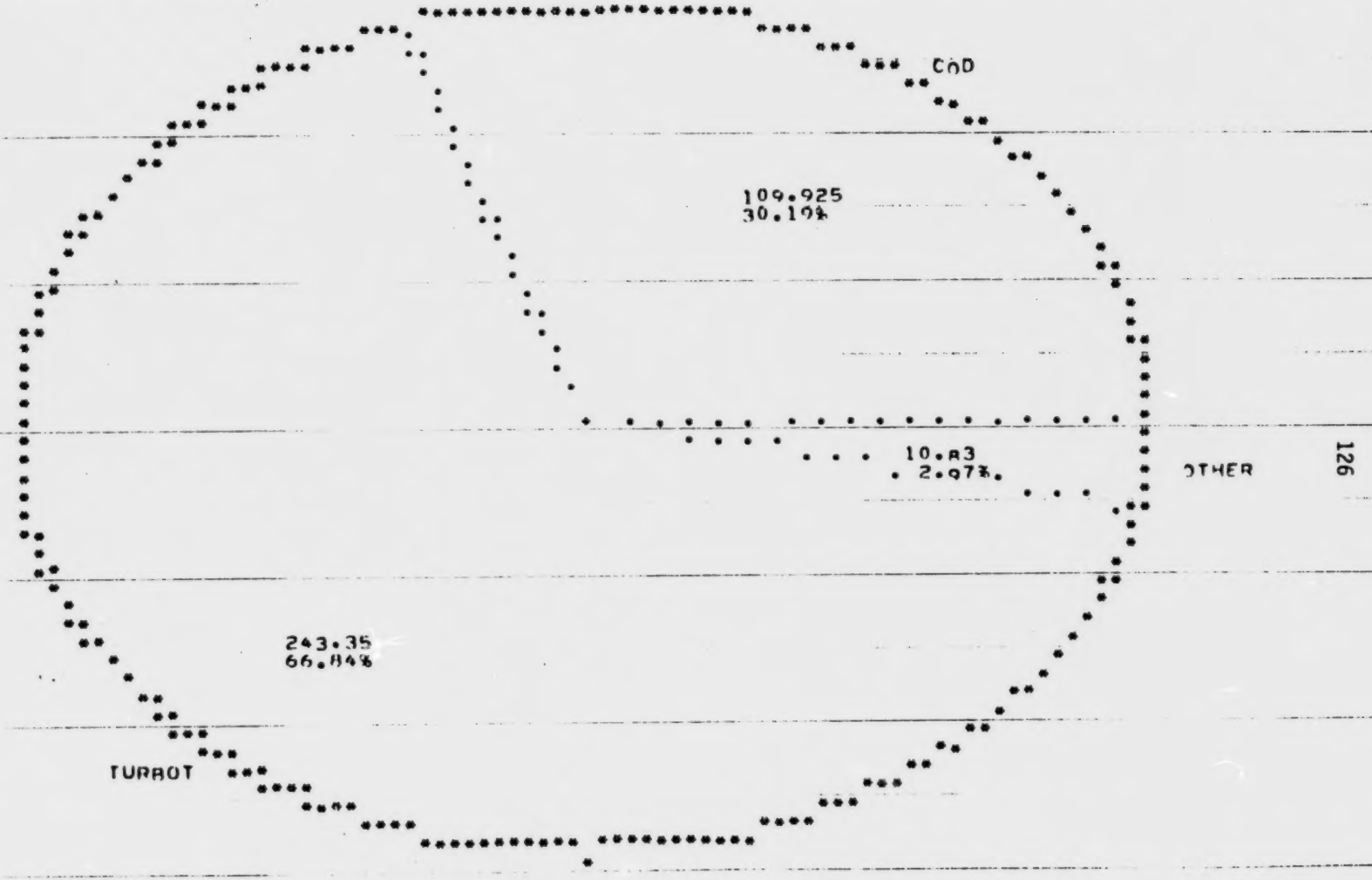


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=MAY NAFO=3K UNITAREA=344

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

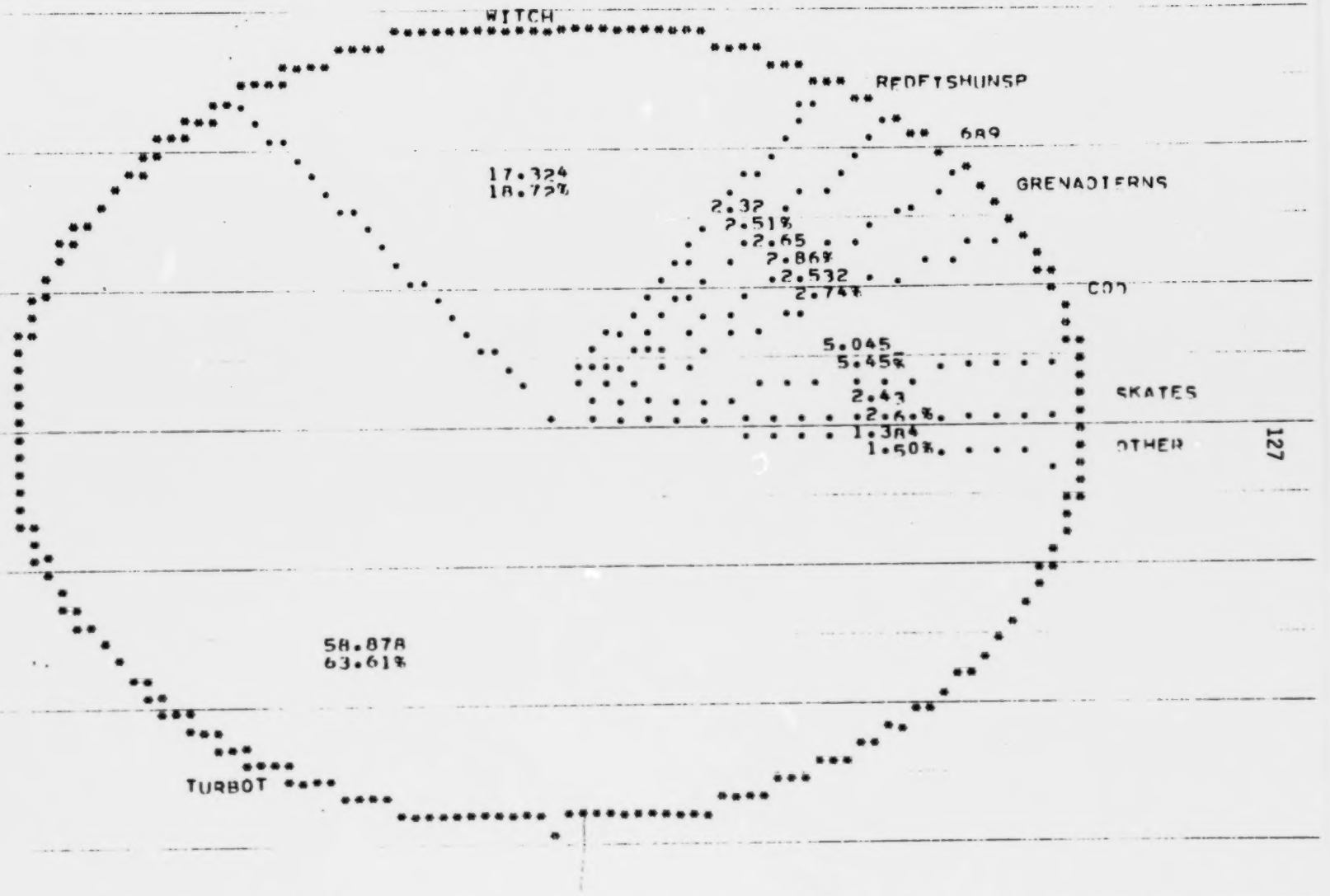
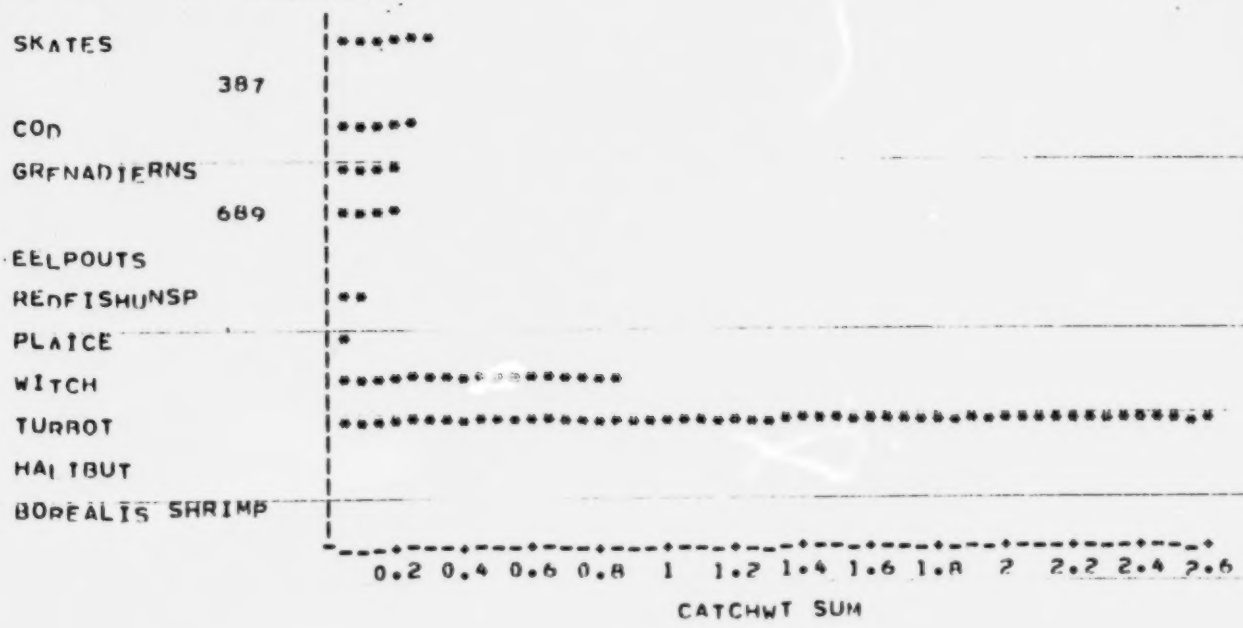


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=MAY NAFO=3K UNITAREA=345

BAR CHART OF SUMS



SPECIES	FREQ	CATCHWT SUM
SKATES	1	0.320000
387	1	0.002000
COD	1	0.241000
GRENADIERNS	1	0.200000
689	2	0.220000
EELPOUTS	1	0.002000
REDFISHUNSP	1	0.120000
PLAICE	1	0.040000
WITCH	1	0.860000
TURBOT	1	2.600000
HALIBUT	1	0.002000
BOREALIS SHRIMP	1	0.001000

Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=3K UNITAREA=339

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

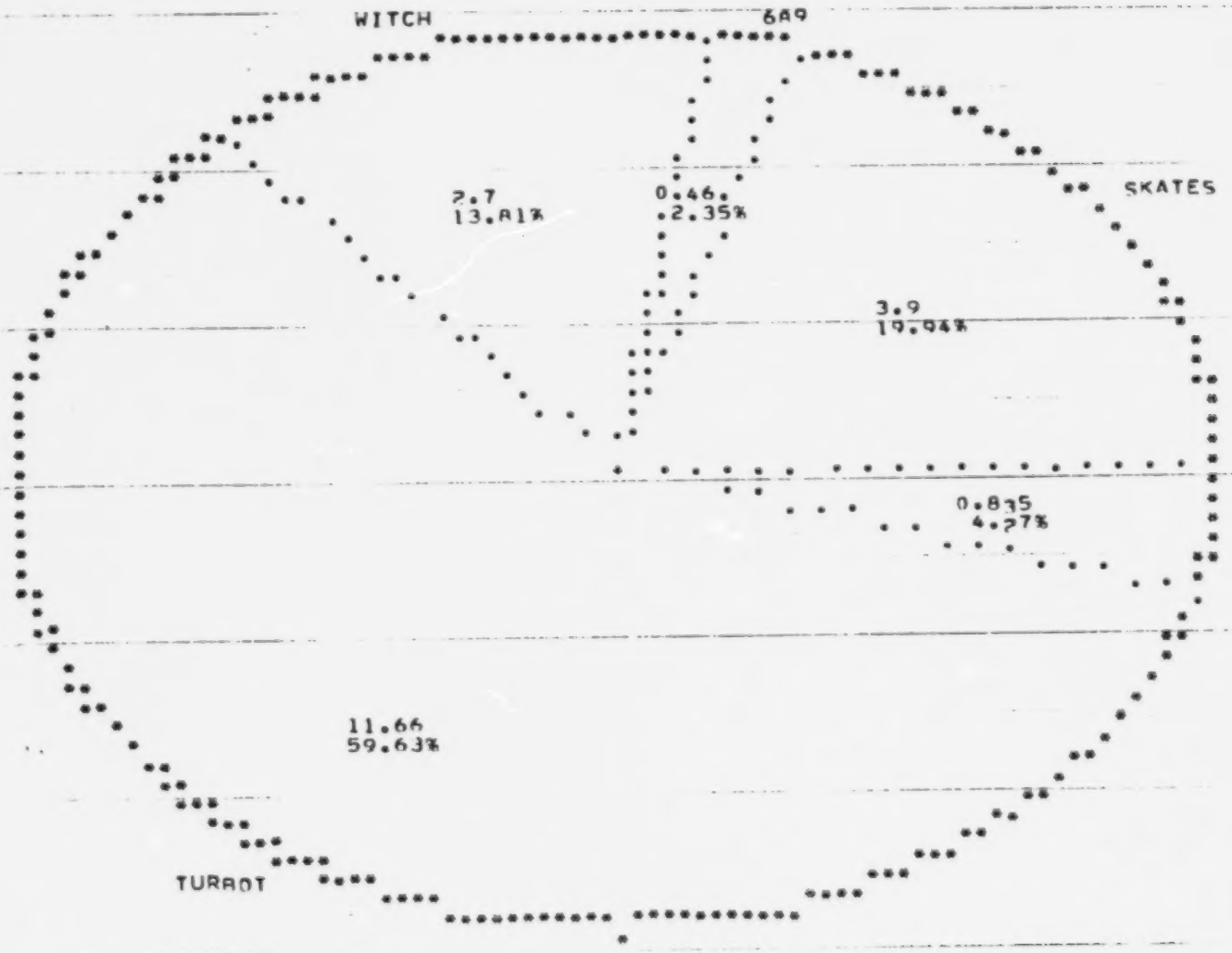


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=3K UNITAREA=343

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

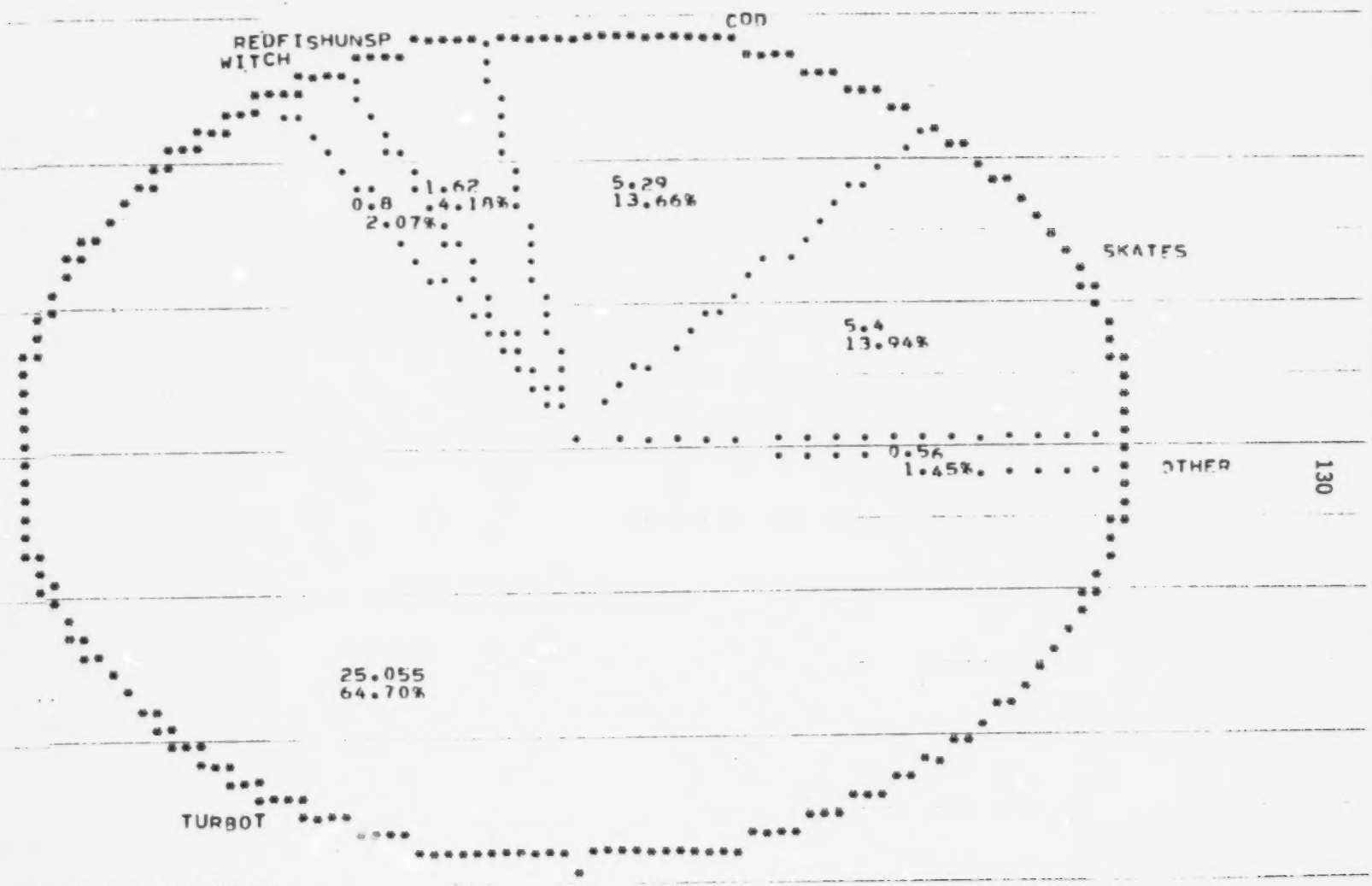


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=3K UNITAREA=344

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

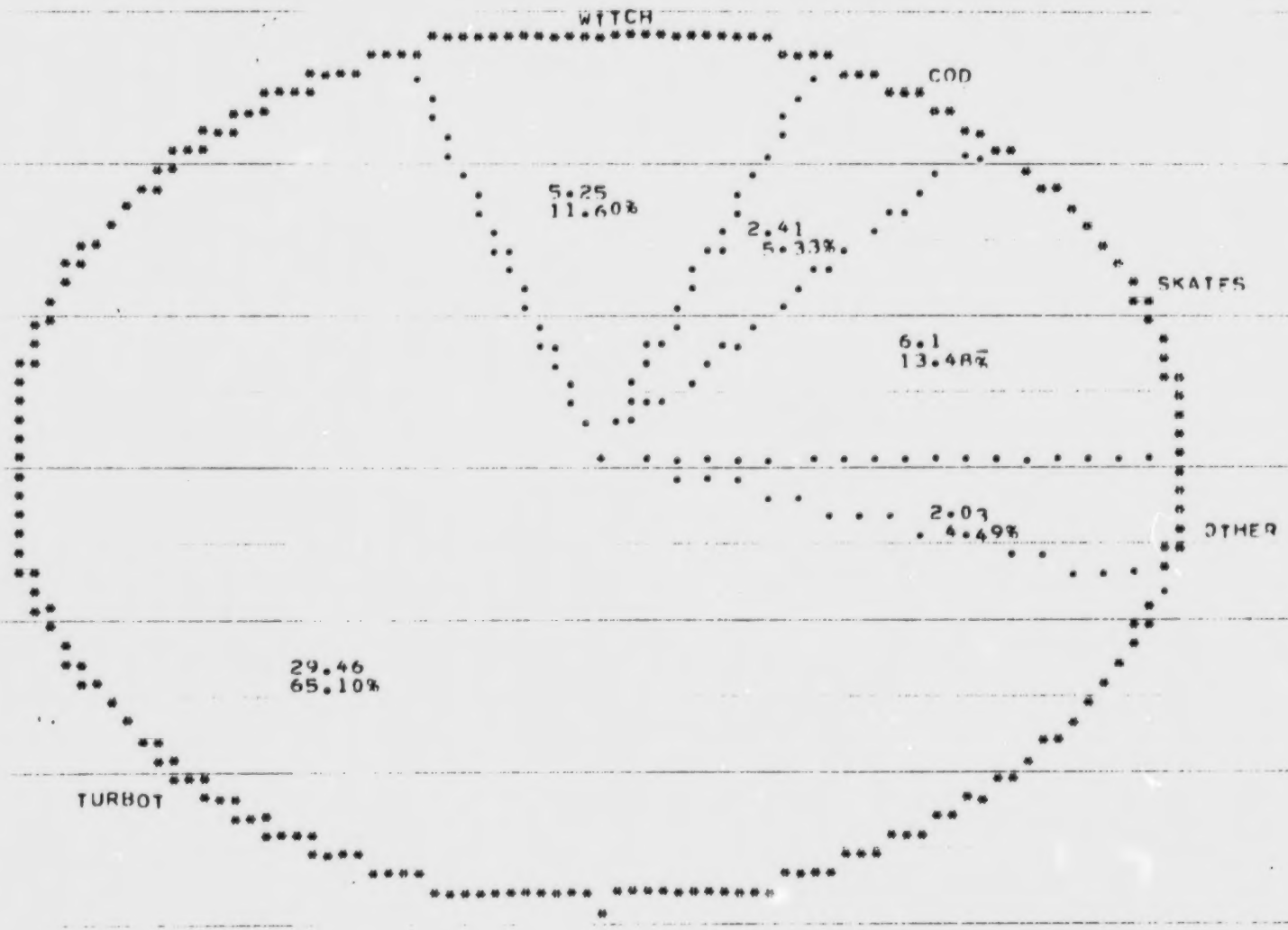


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2H UNITAREA=?1?

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

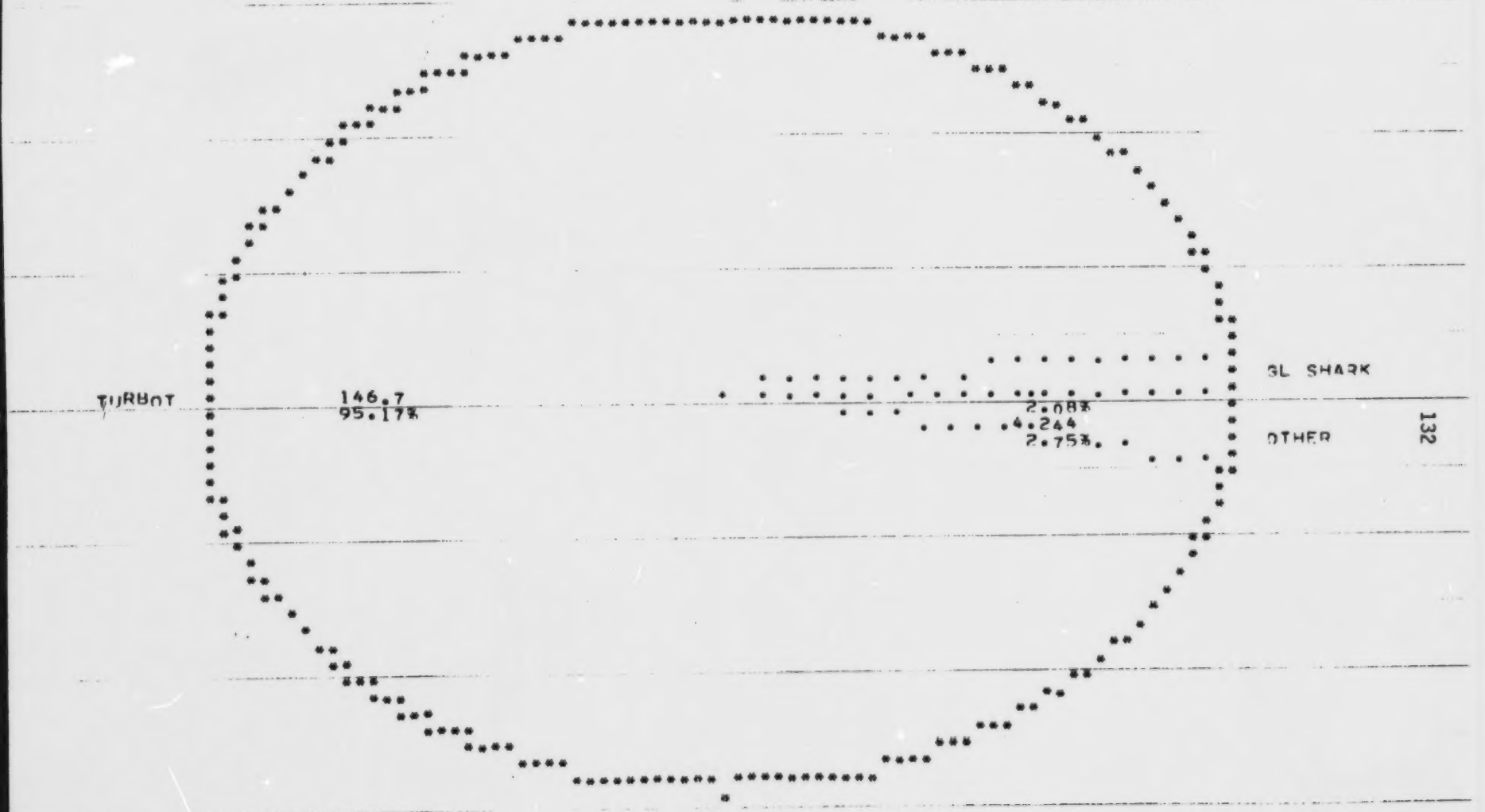


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2H UNITAREA=215

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

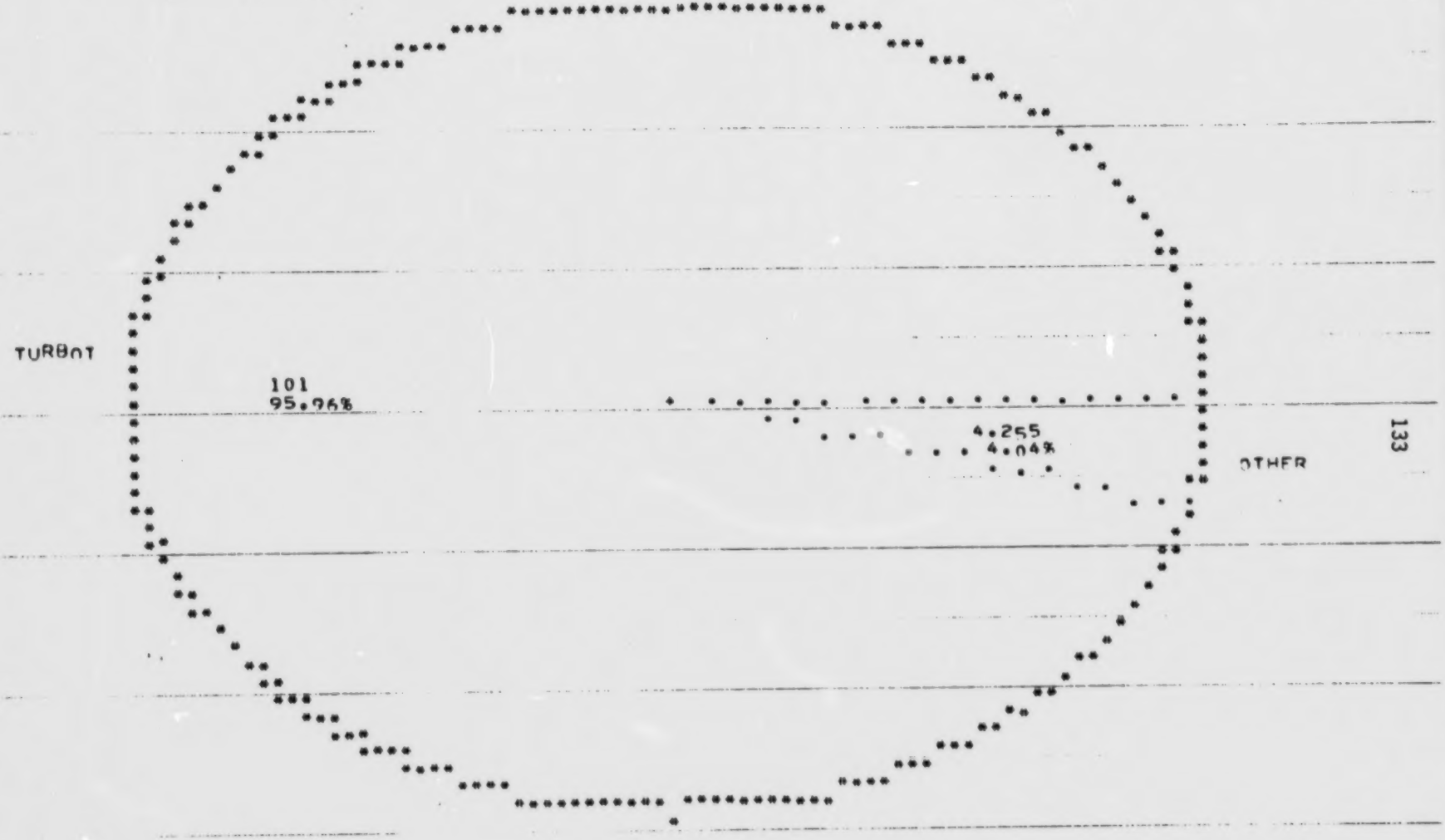


Fig. 2. SPECIES COMPOSITION,TURBOT FISHERY,1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2H UNITAREA=216

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

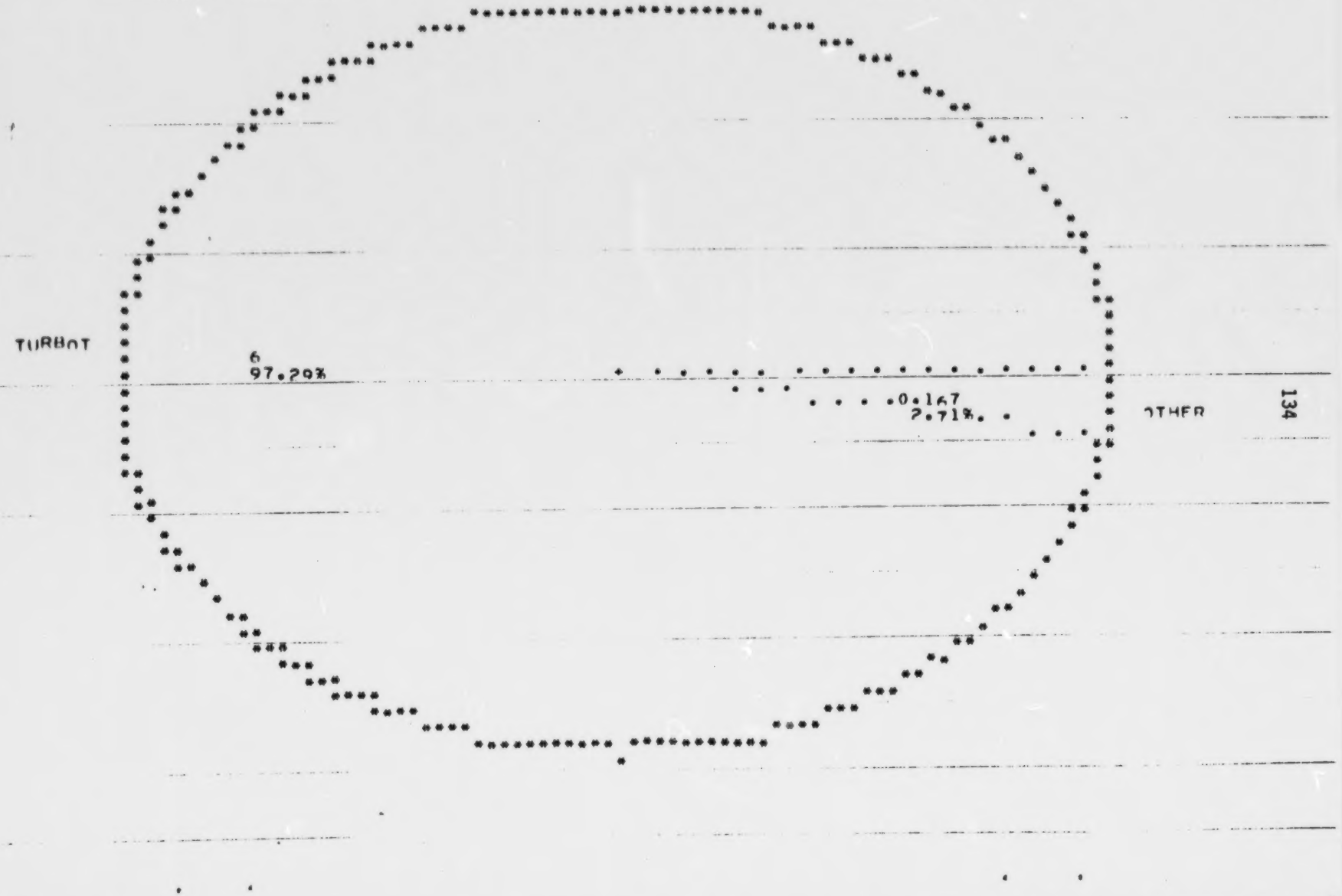


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2J UNITAREA=210

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

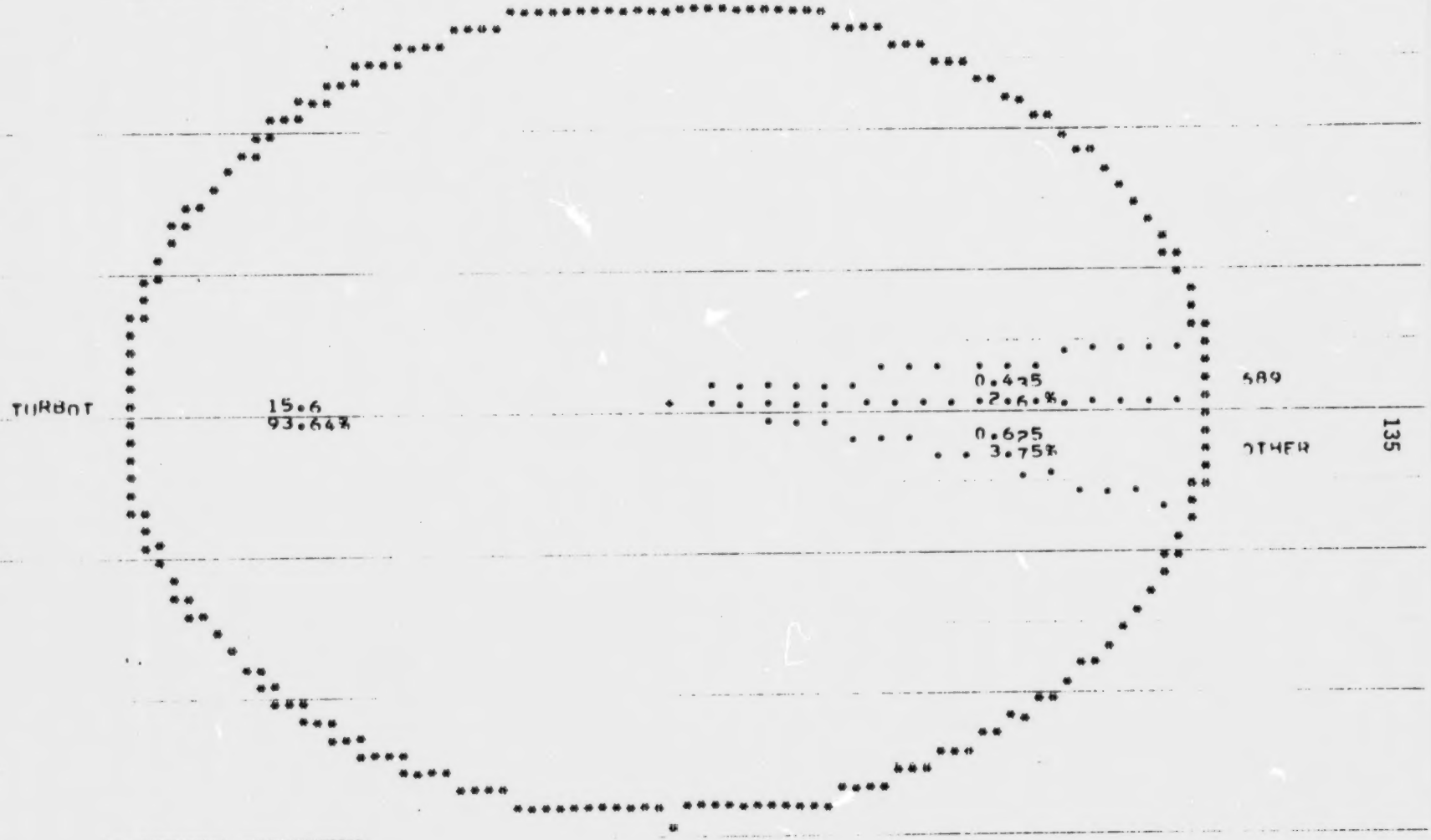


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2H UNITAREA=212

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

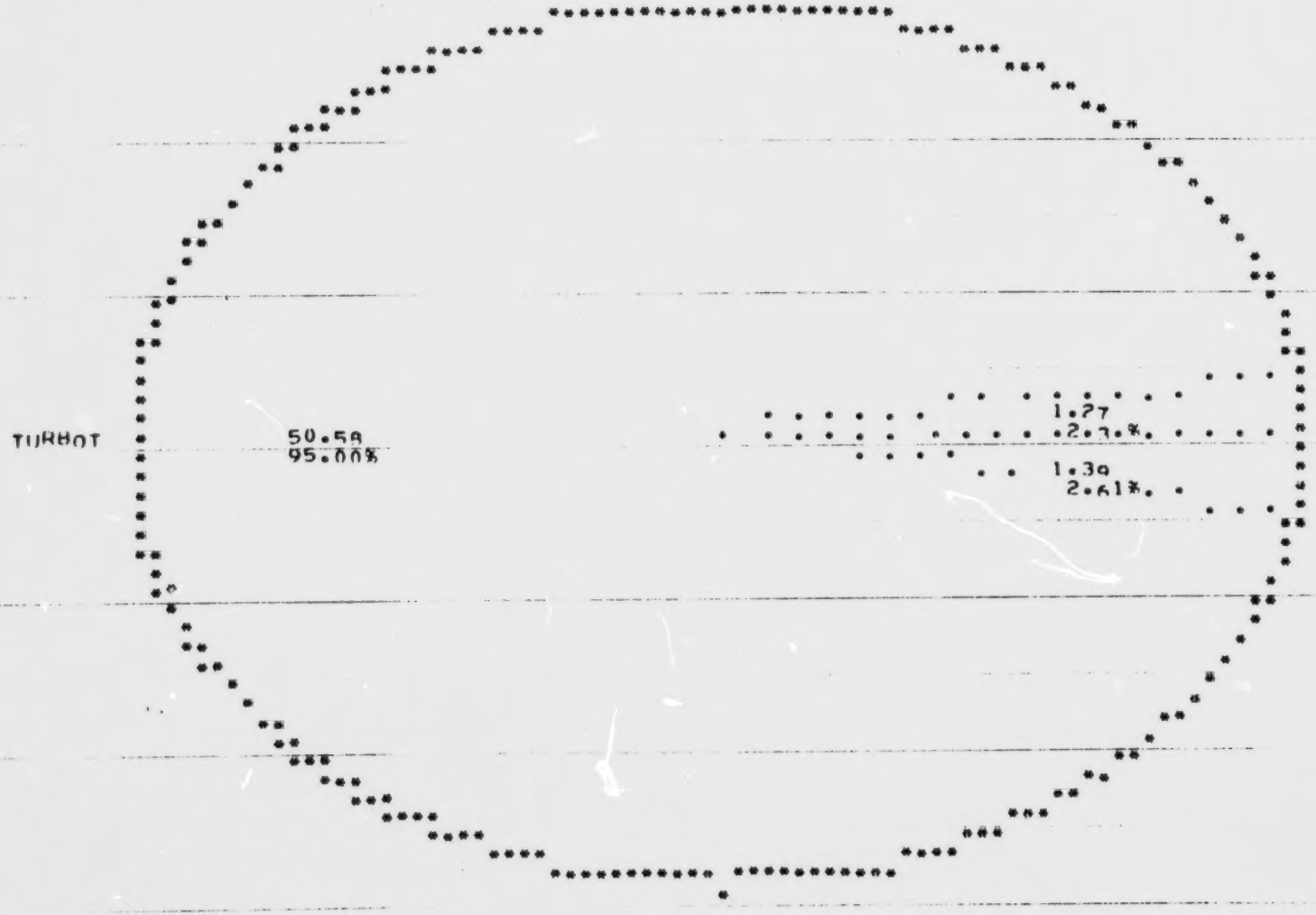


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2H UNITAREA=21S

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

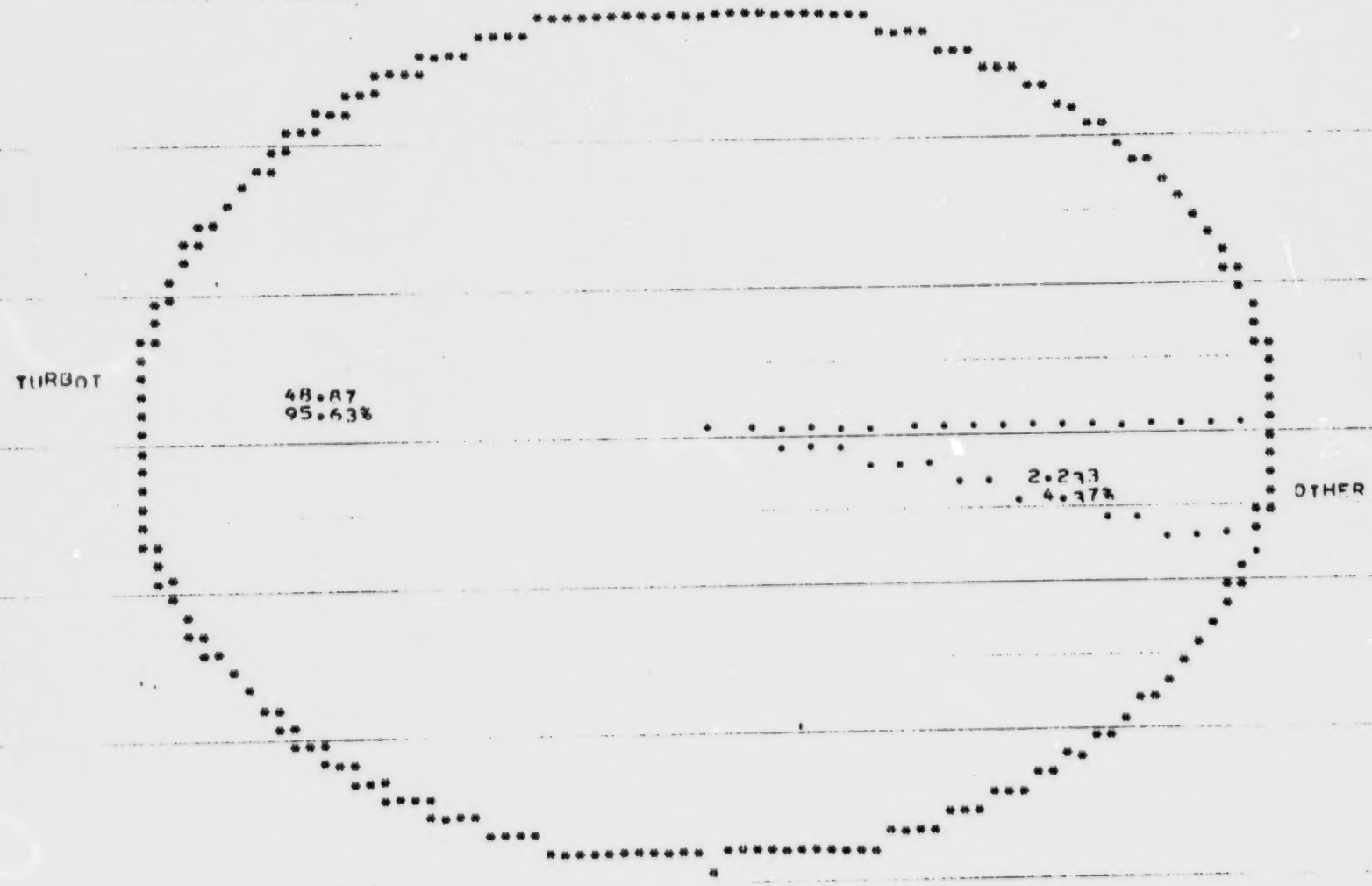


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2J UNITAREA=203

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

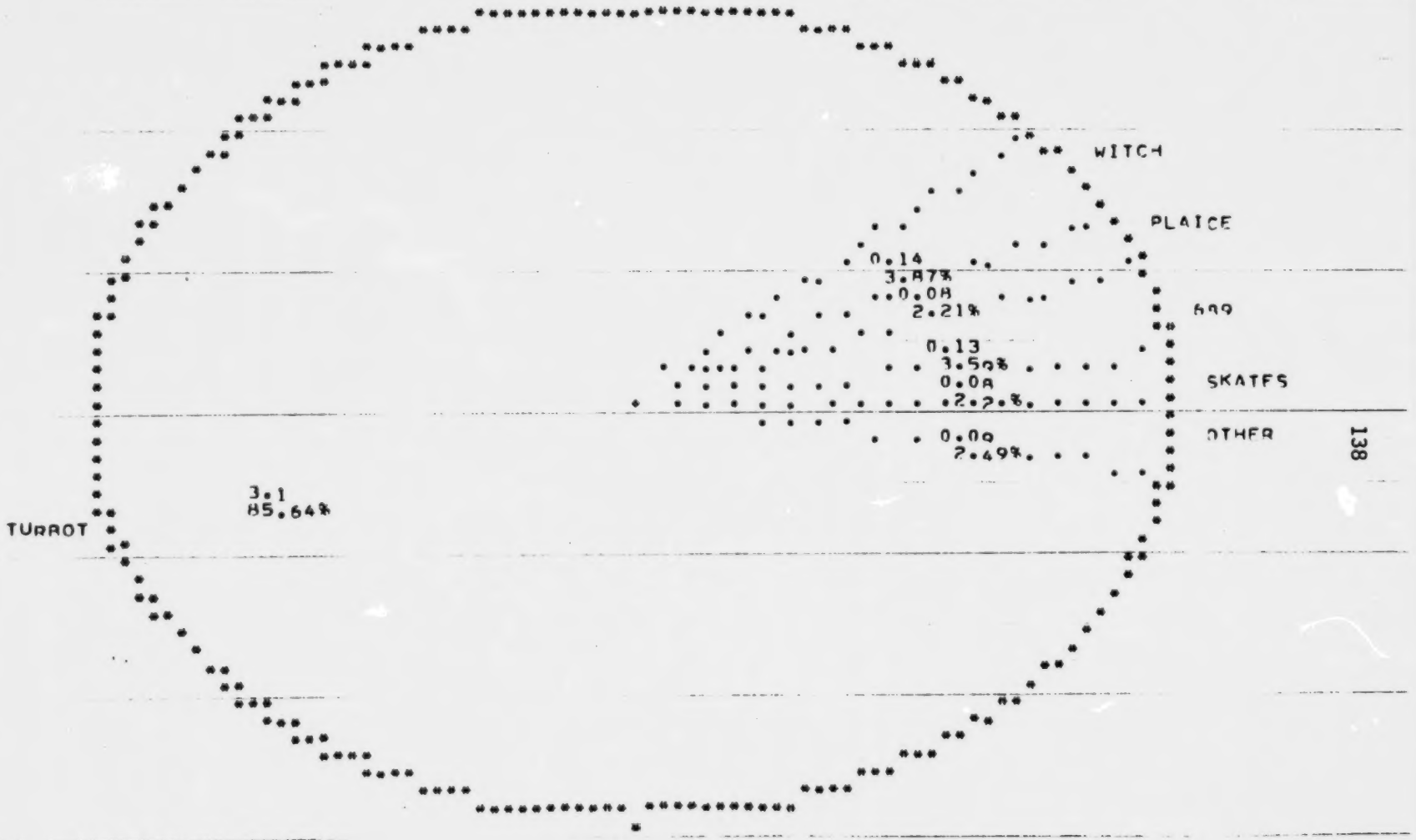


Fig. 2. SPECIES COMPOSITION.TURBOT FISHERY.1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2J UNITAREA=207

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

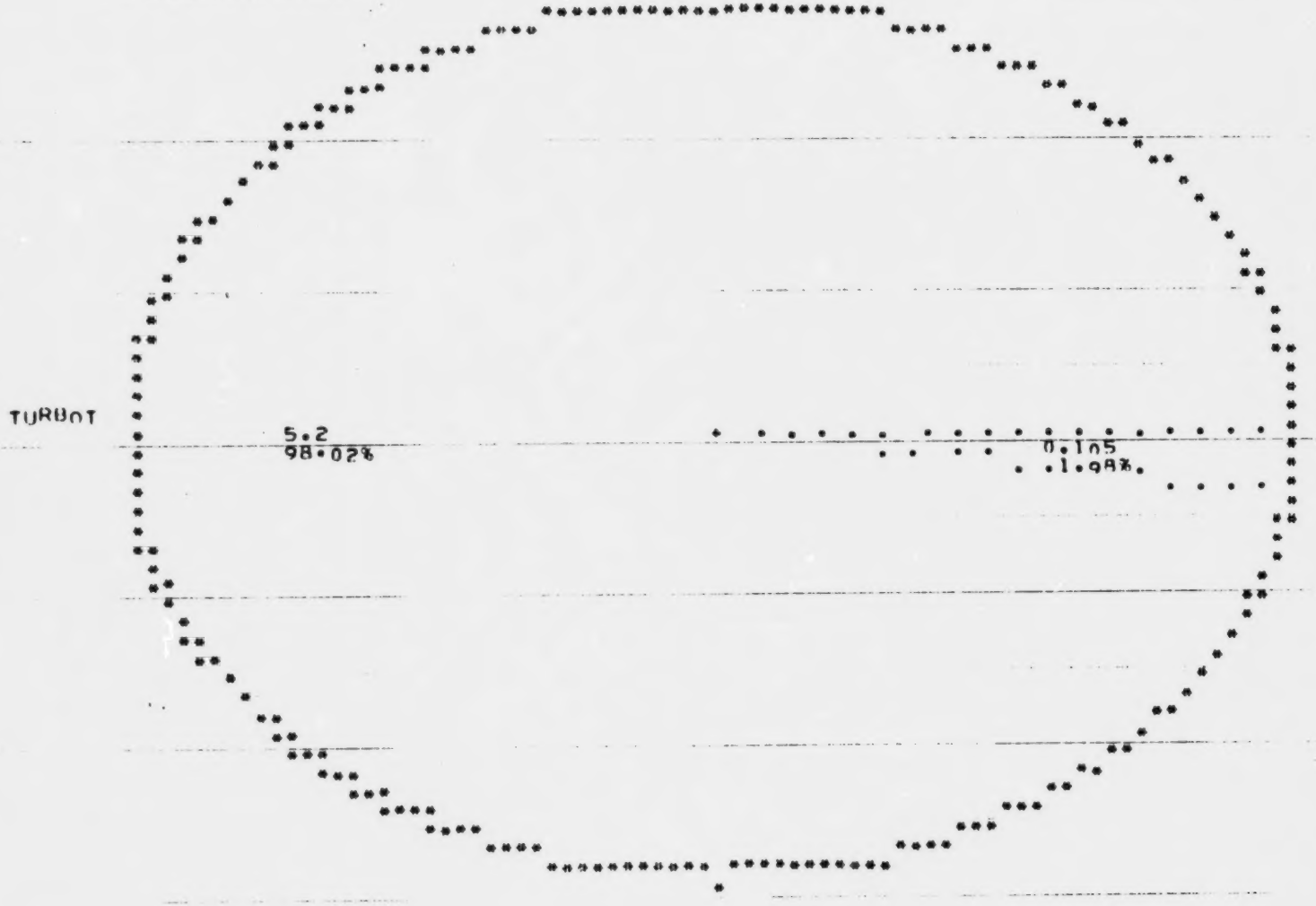


Fig. 2. SPECIES COMPOSITION,TURBOT FISHERY,1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2J UNITAREA=210

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

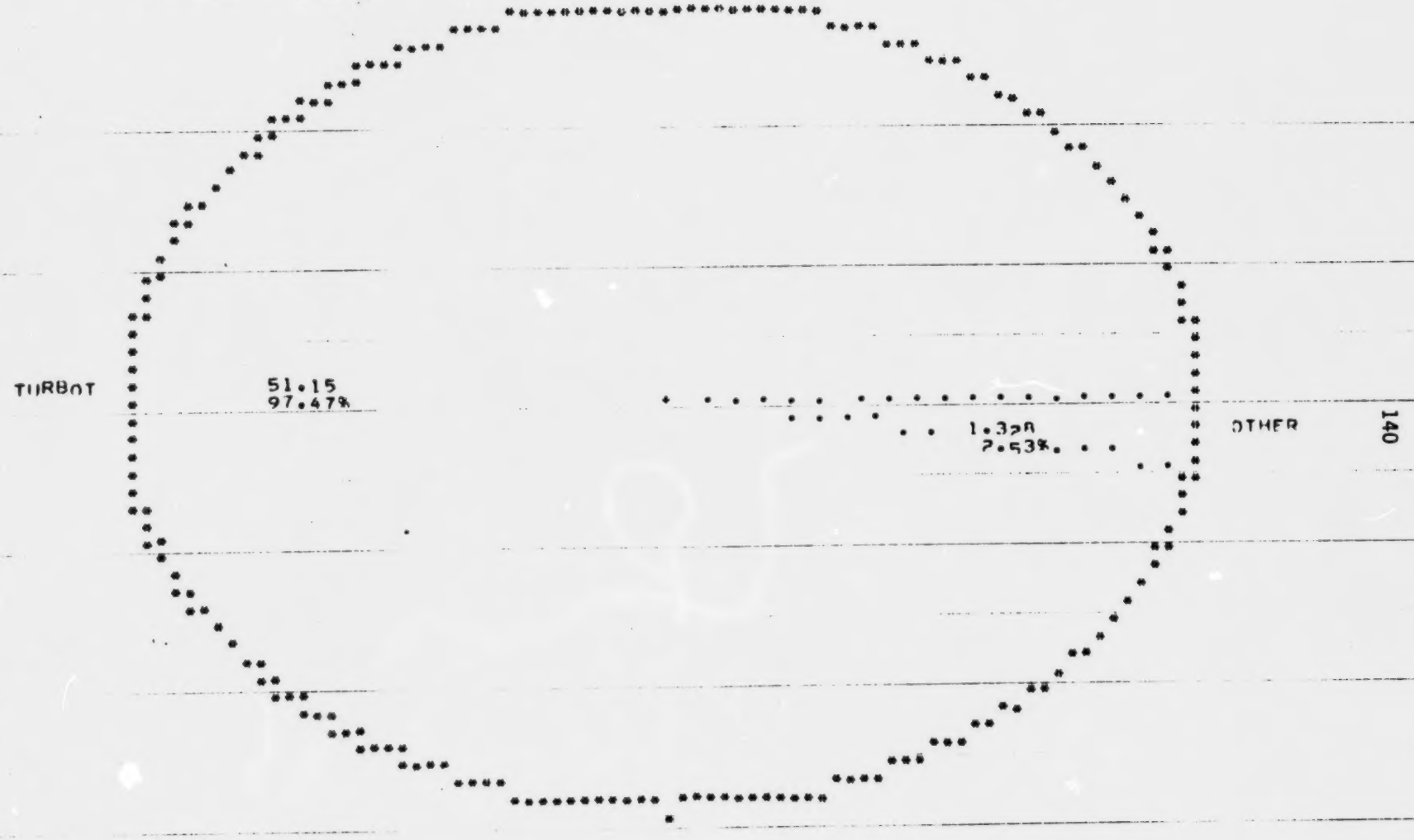


Fig. 2. SPECIES COMPOSITION.TURBOT FISHERY.1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=3K UNITAREA=343

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

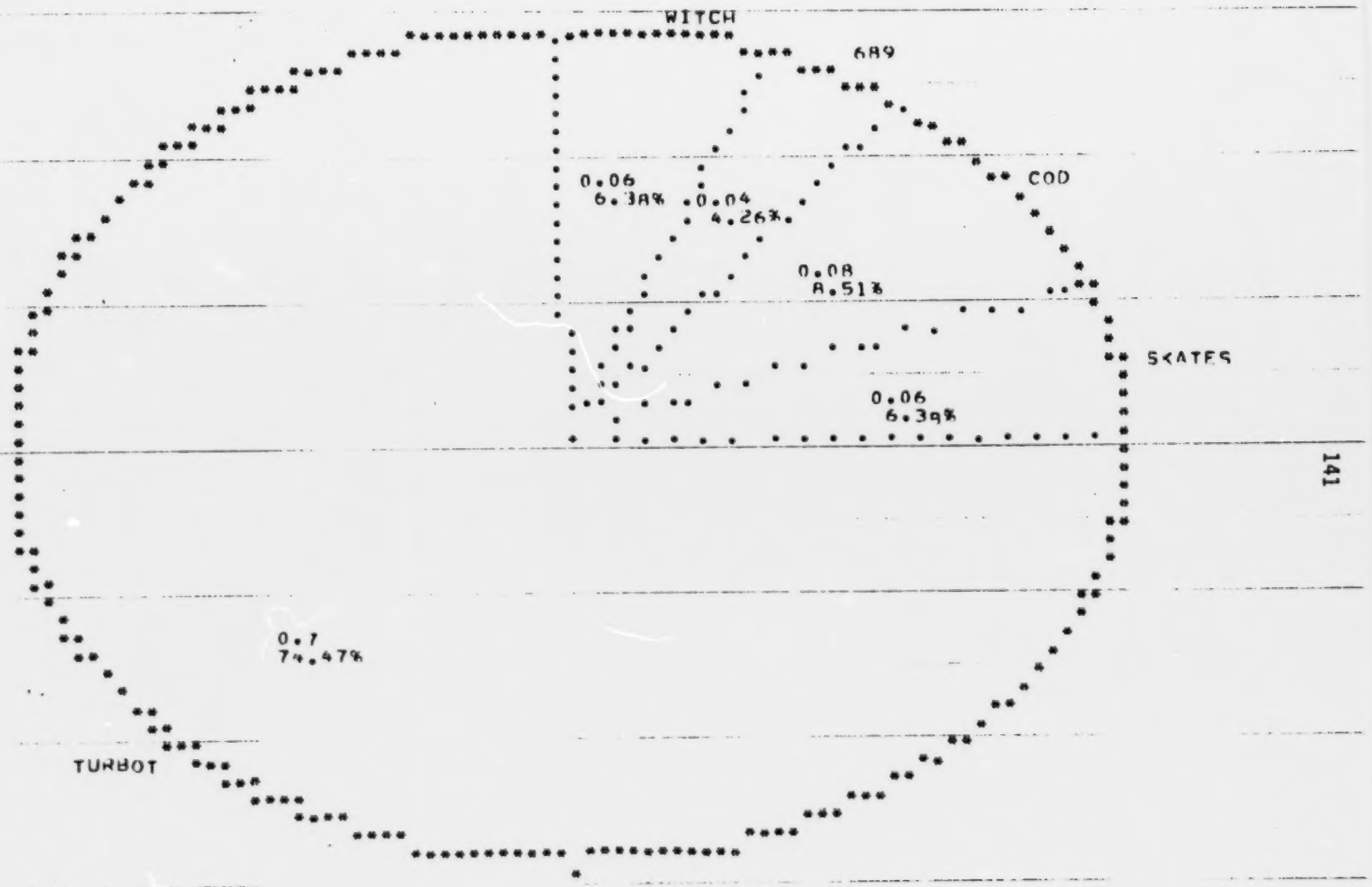


Fig. 2. SPECIES COMPOSITION,TURBOT FISHERY,1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=2J UNITAREA=203

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

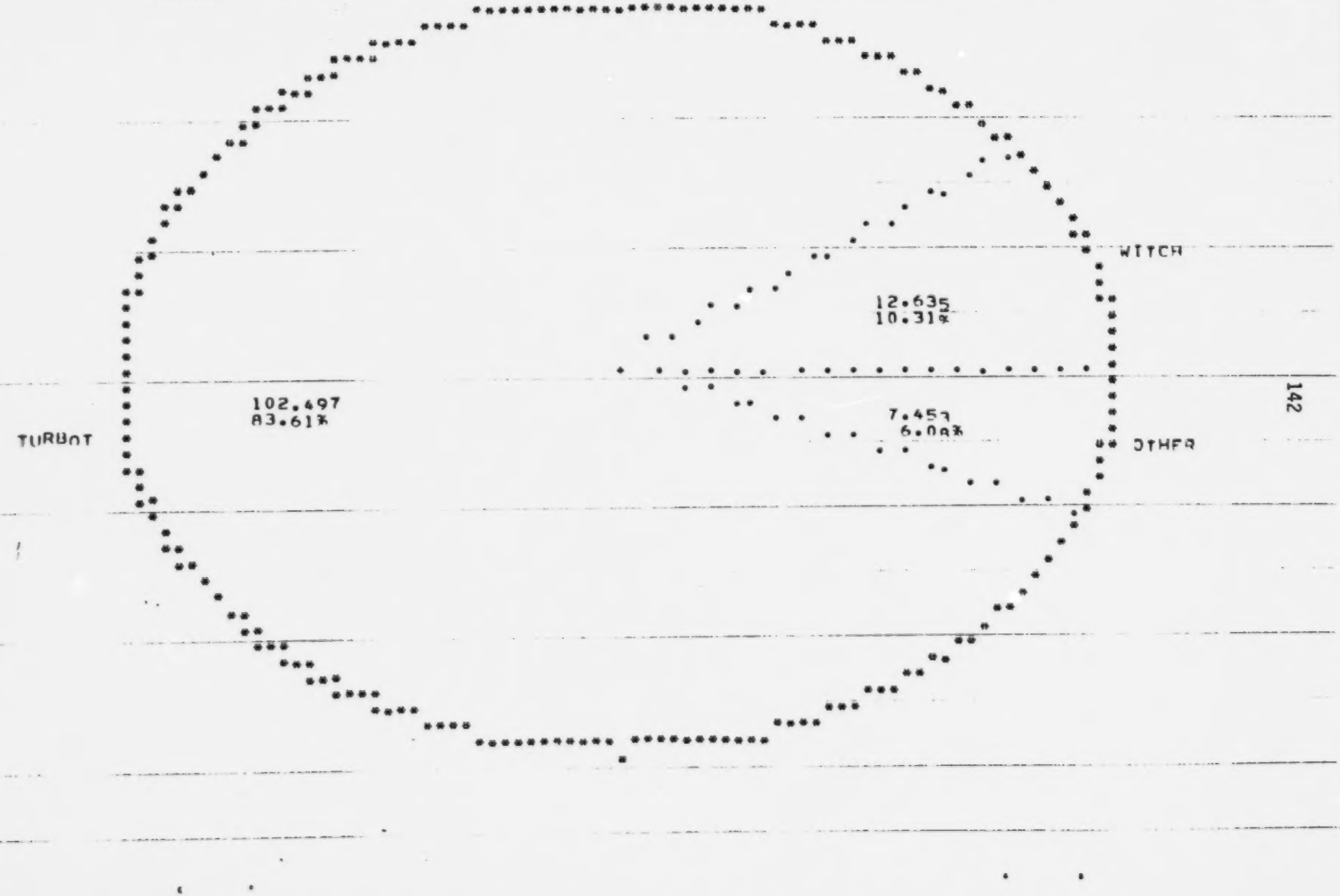


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=2J UNITAREA=206

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

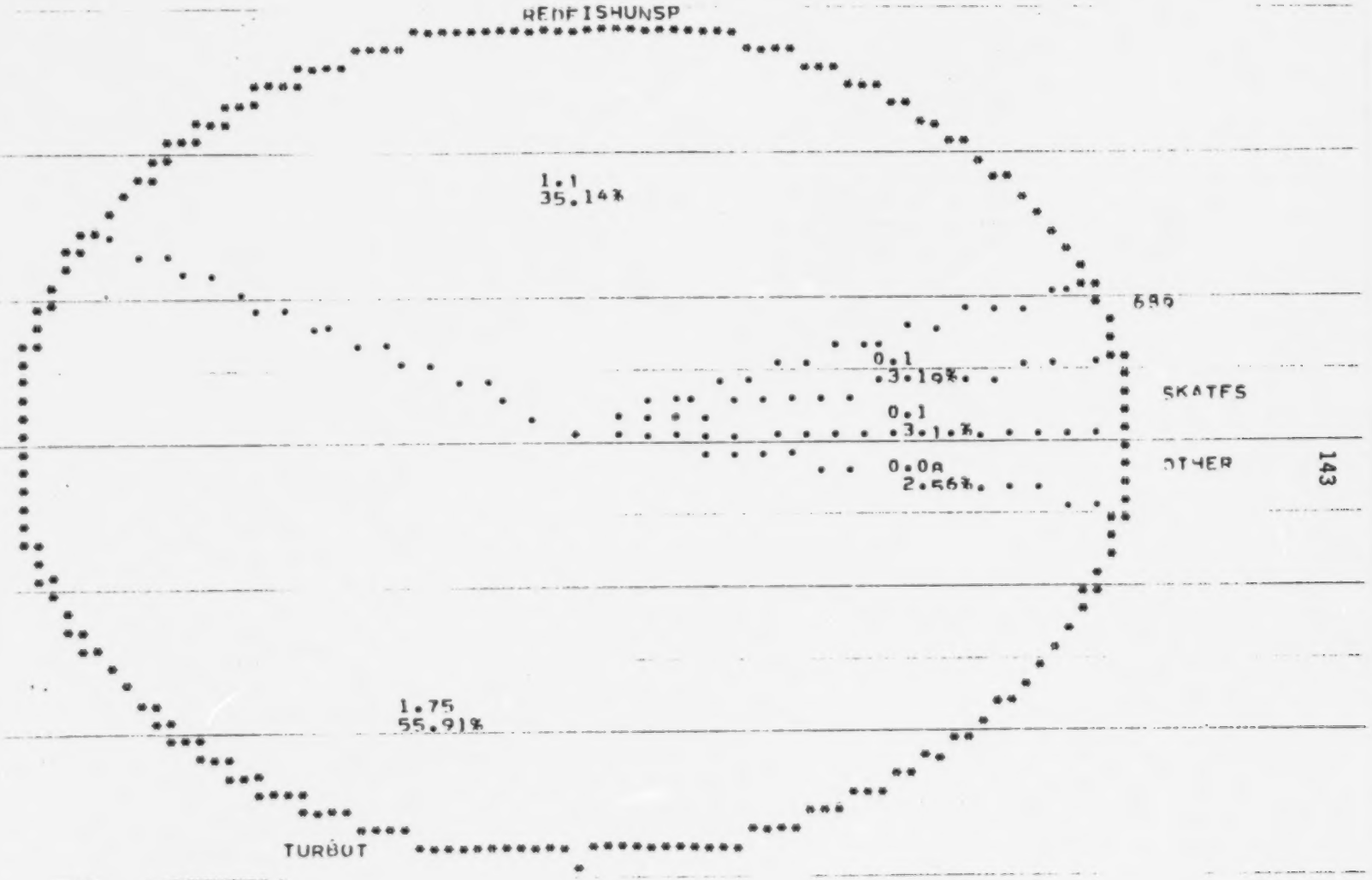


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=2J UNITAREA=207

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

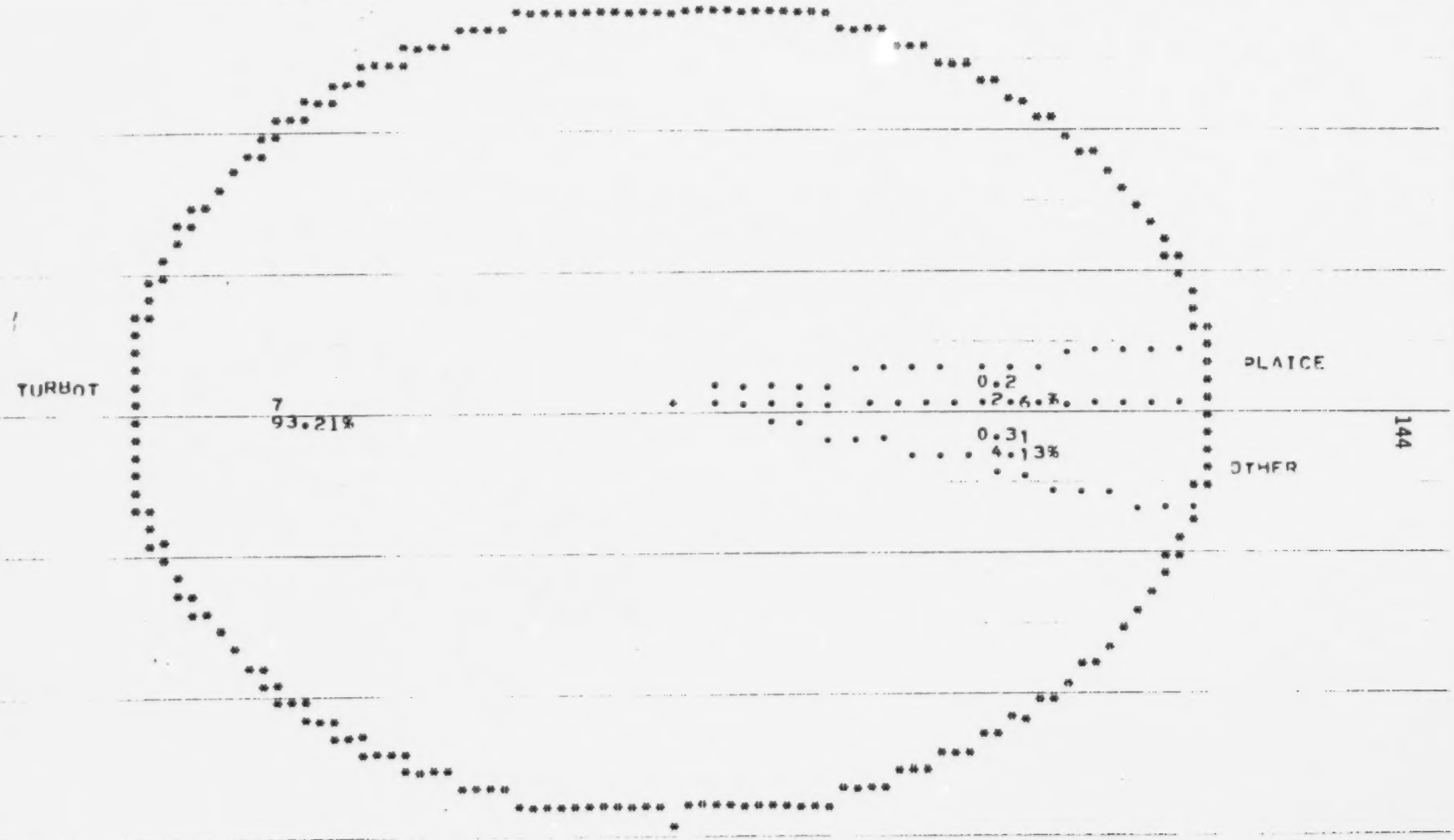


Fig. 2. SPECIES COMPOSITION.TURBOT FISHERY.1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=2J UNITAREA=210

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

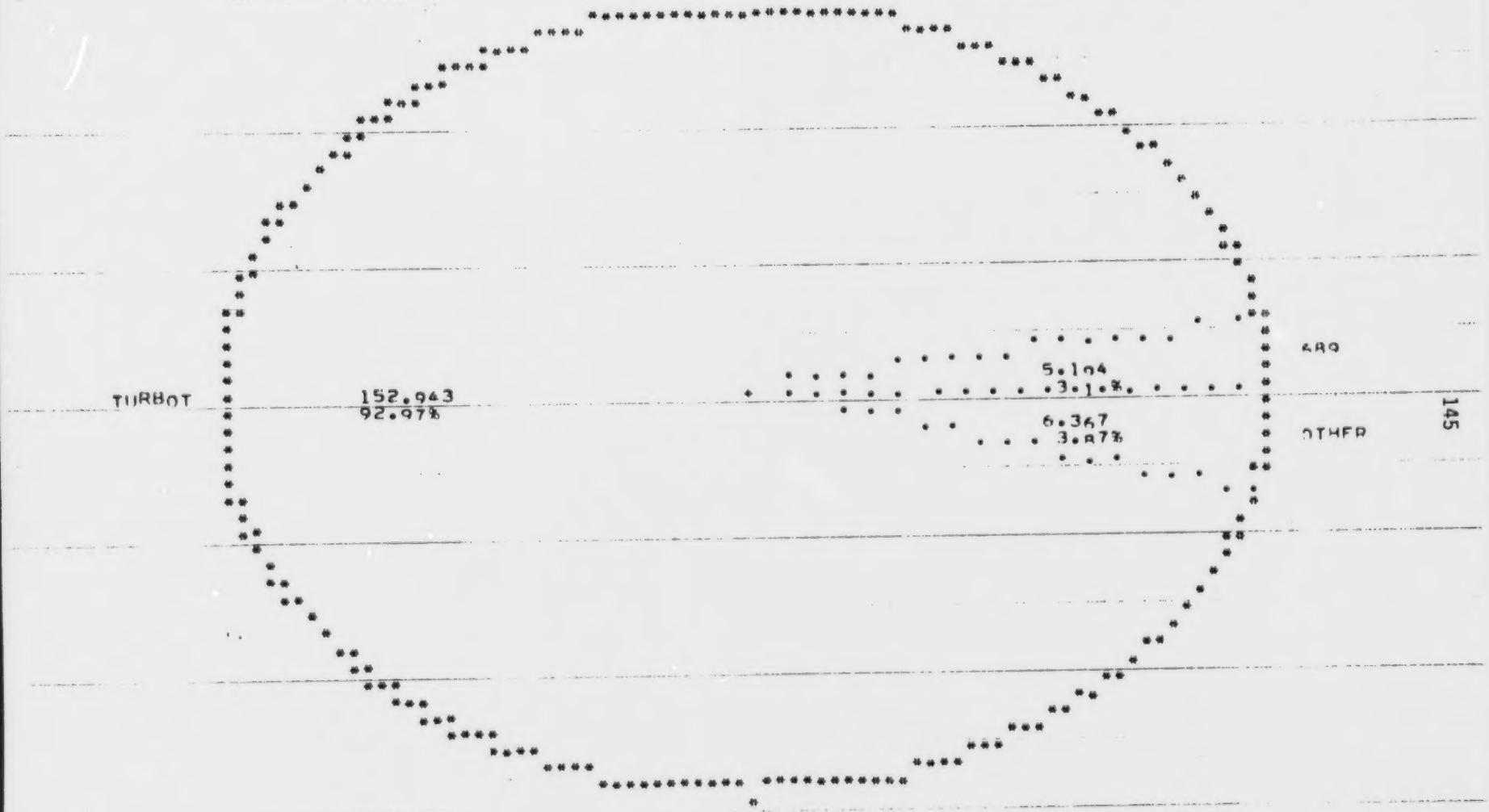


Fig. 2. SPECIES COMPOSITION.TURBOT FISHERY.1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=3K UNITAREA=343

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

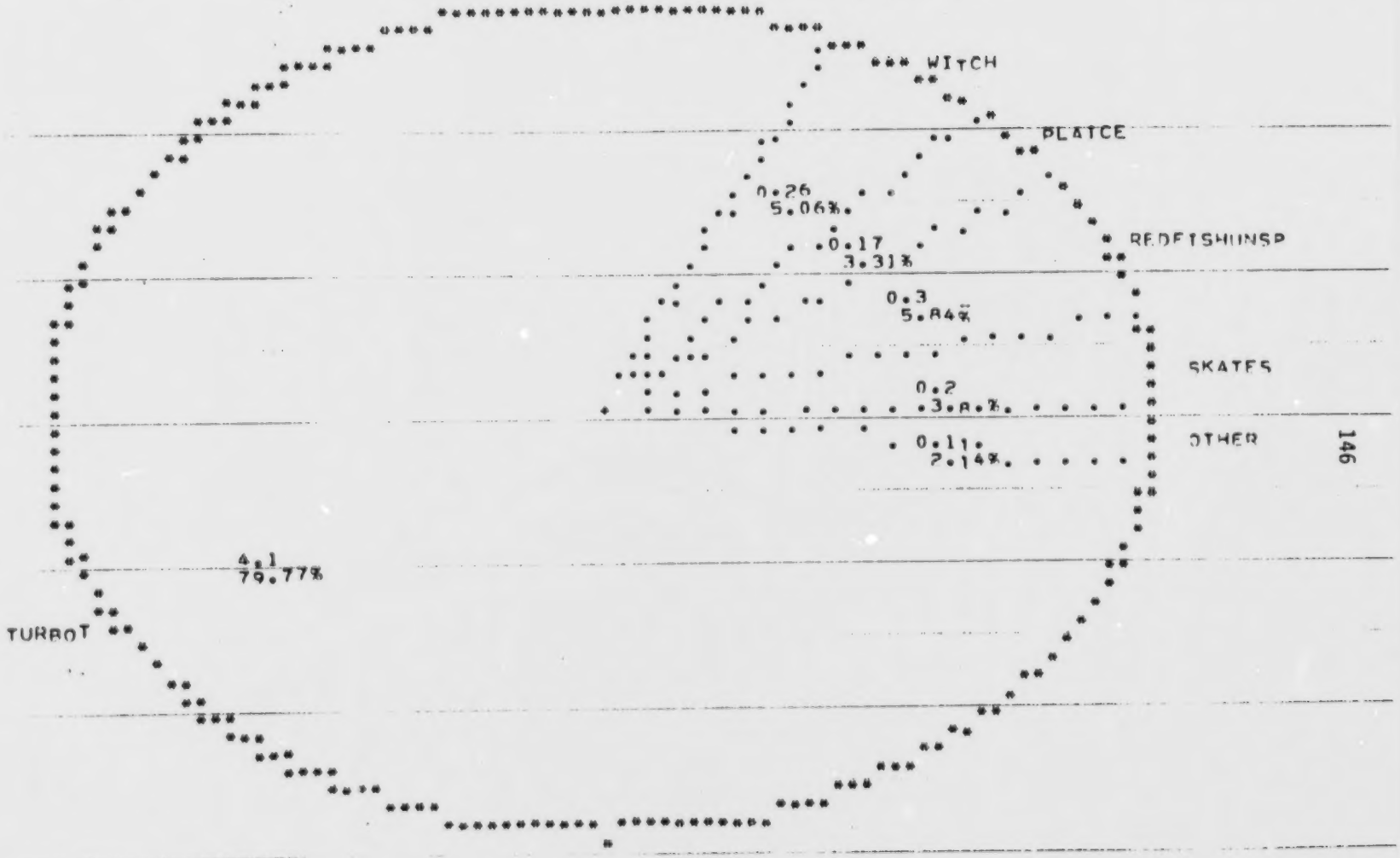


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=3K UNITAREA=344

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

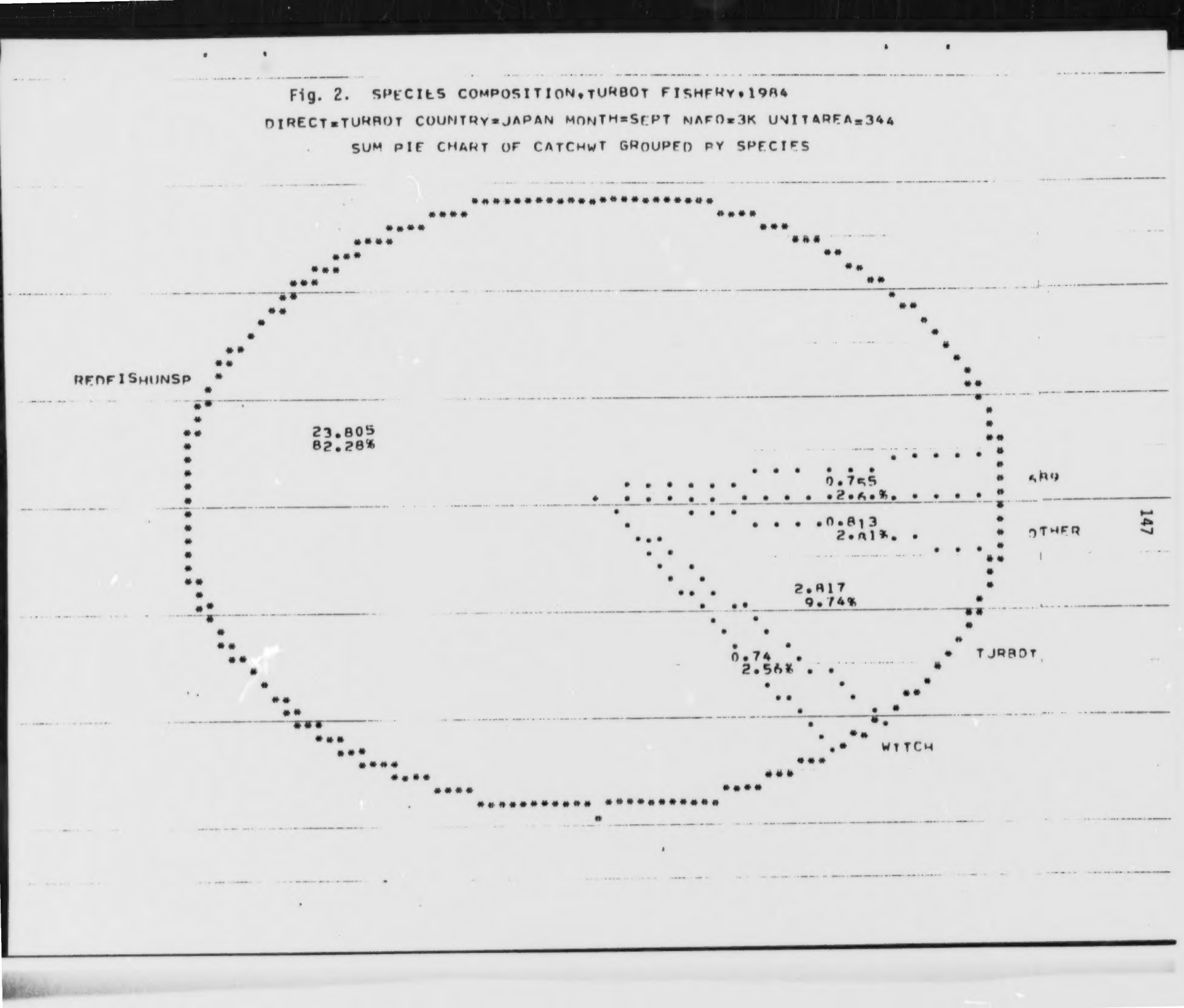


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=3K UNITAREA=345

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

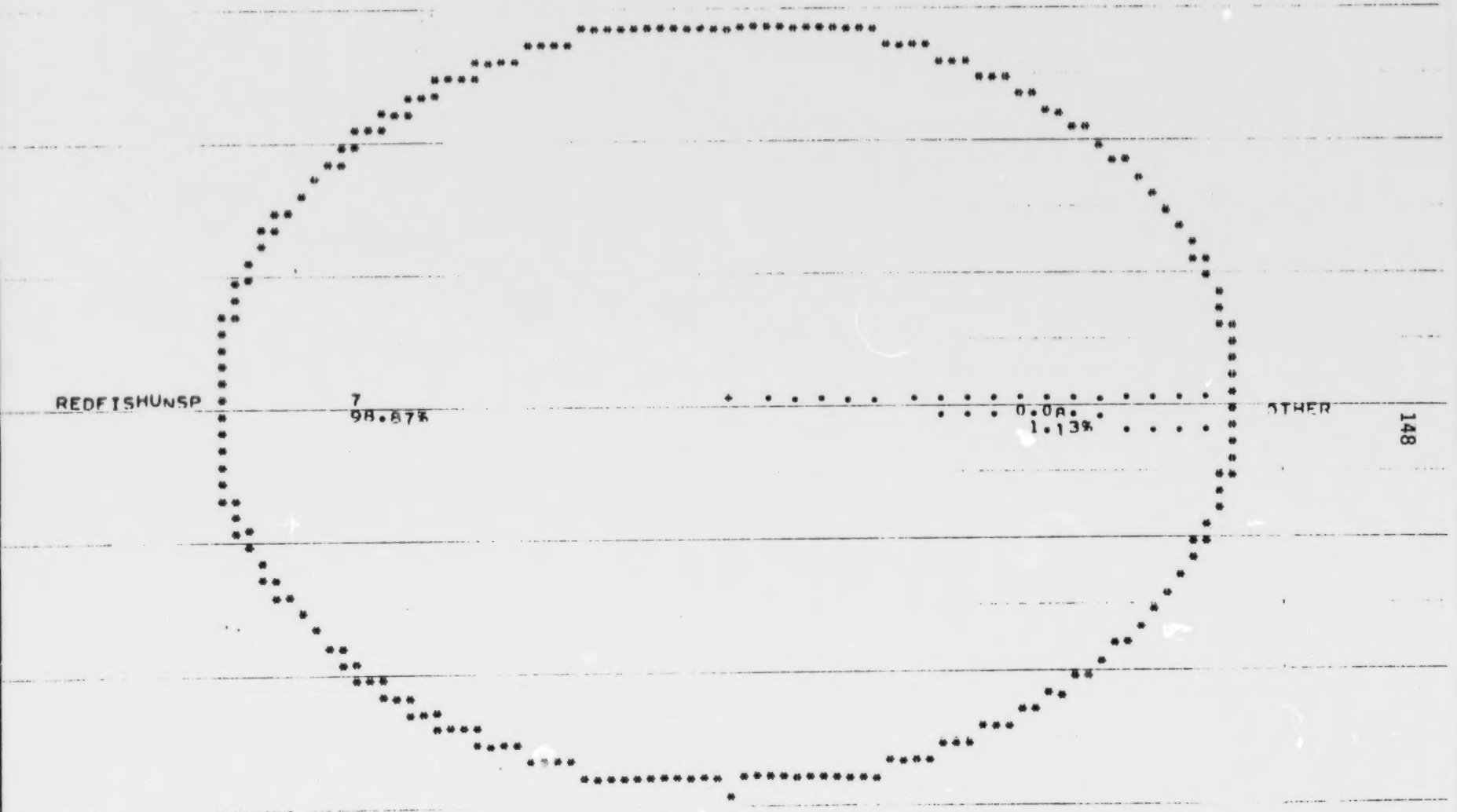


Fig. 2. SPECIES COMPOSITION,TURBOT FISHERY,1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=NOV NAFO=2J UNITAREA=203

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

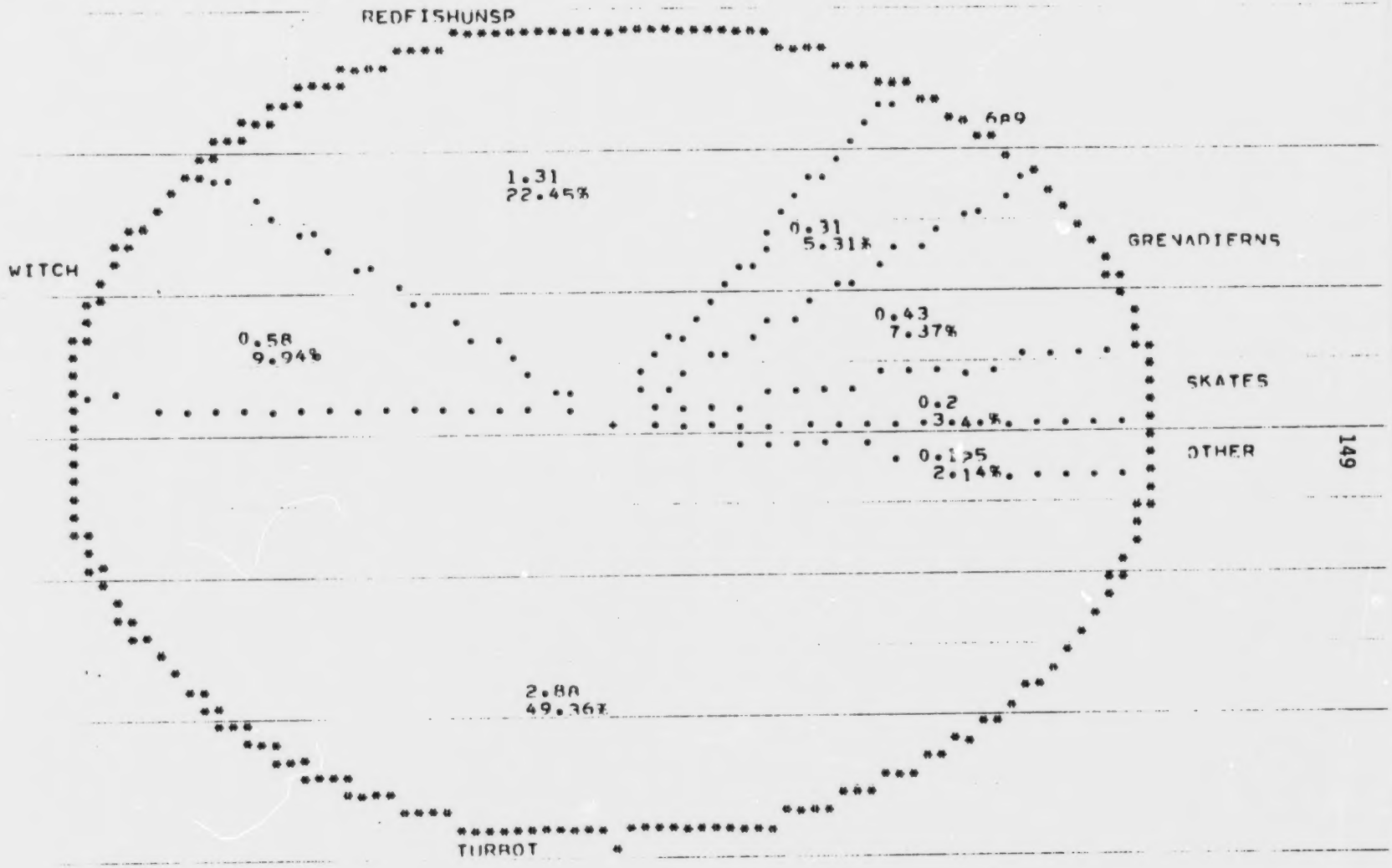


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=NOV NAFO=2J UNITAREA=2GH

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

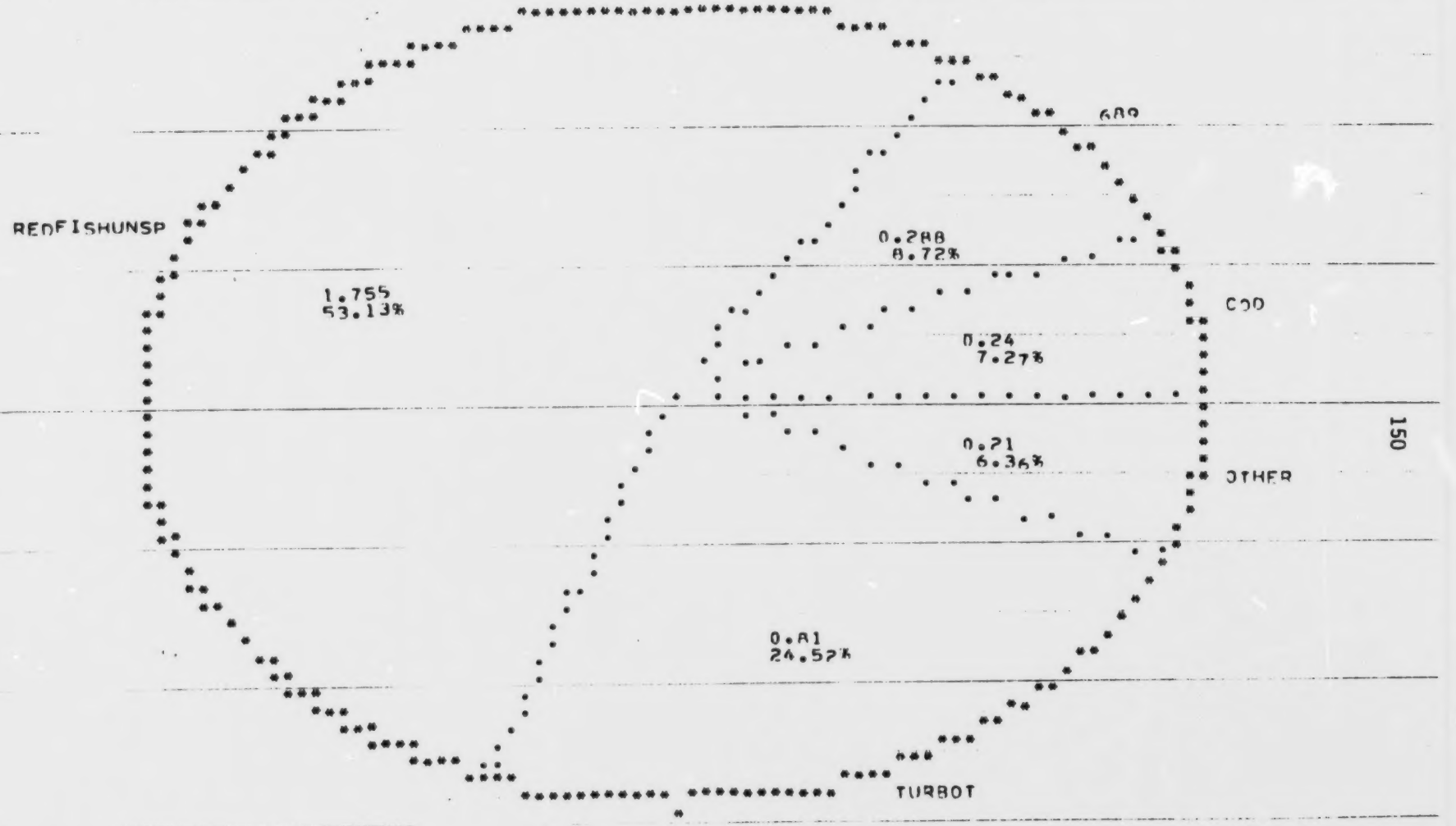


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=NOV NAFO=2J UNITAREA=207

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

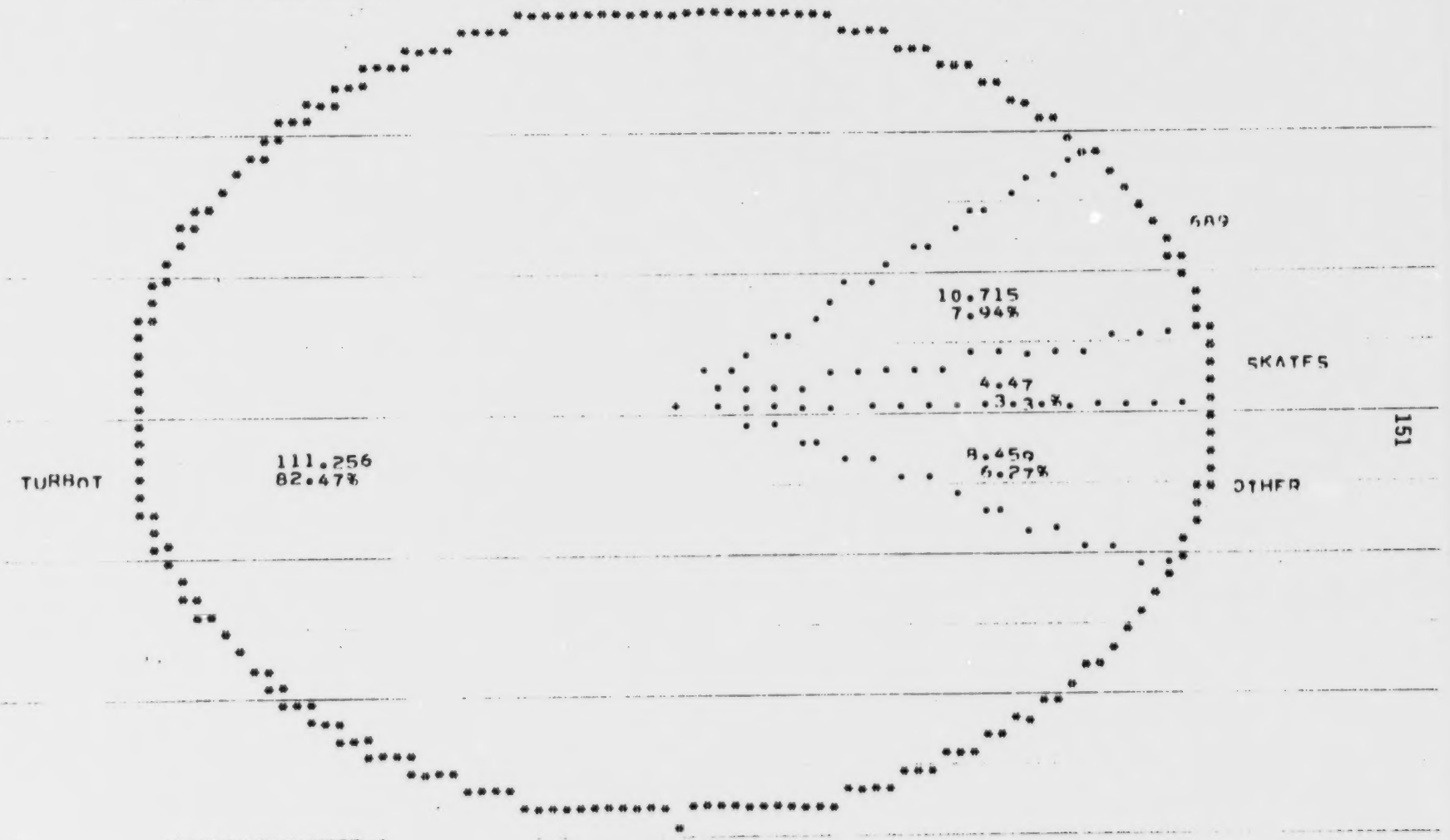


Fig. 2. SPECIES COMPOSITION,TURBOT FISHERY,1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=NOV NAFO=2J UNITAREA=210

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

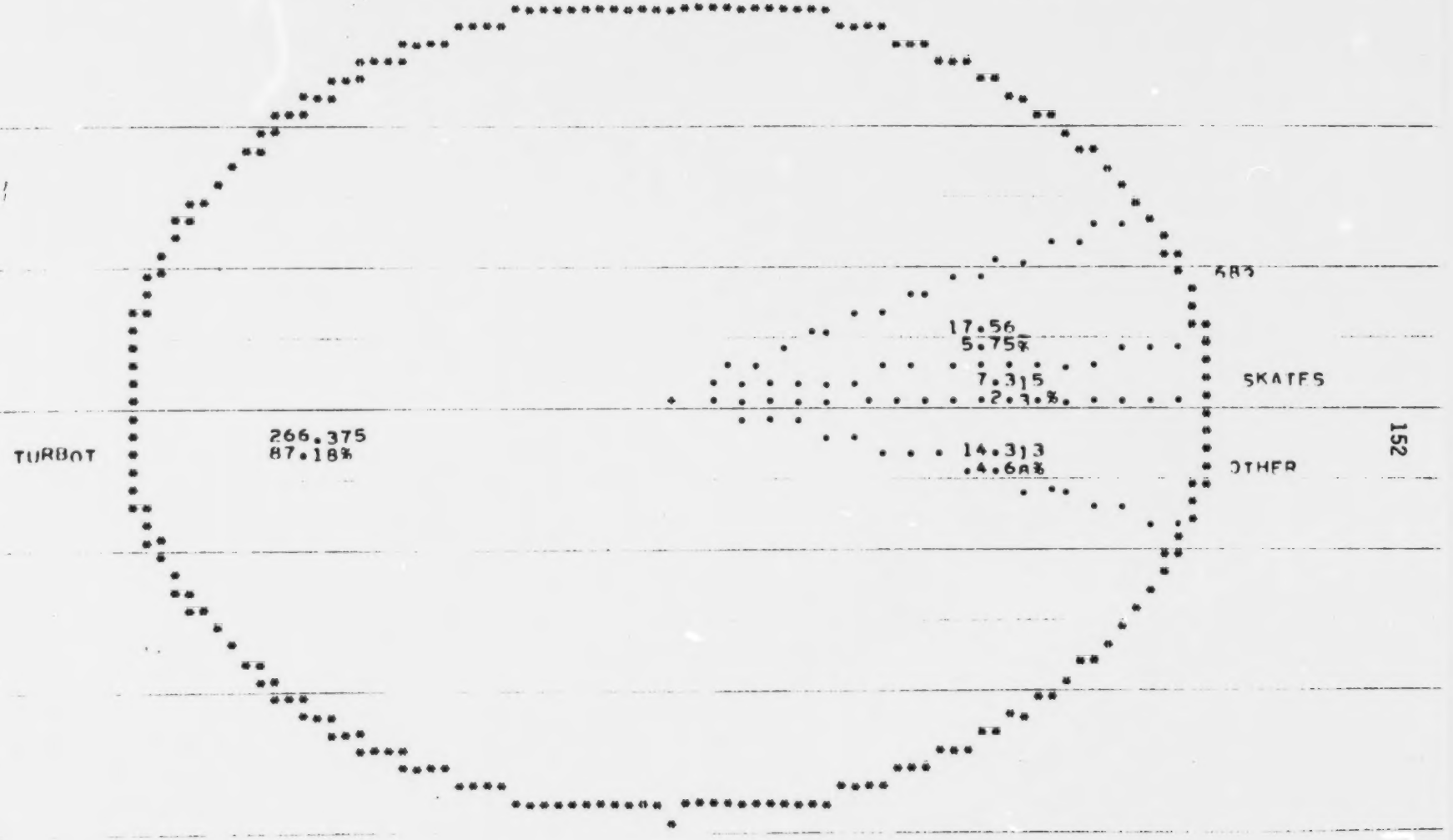


Fig. 2. SPECIES COMPOSITION,TURBOT FISHERY,1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=NOV NAFO=3K UNITAREA=345

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

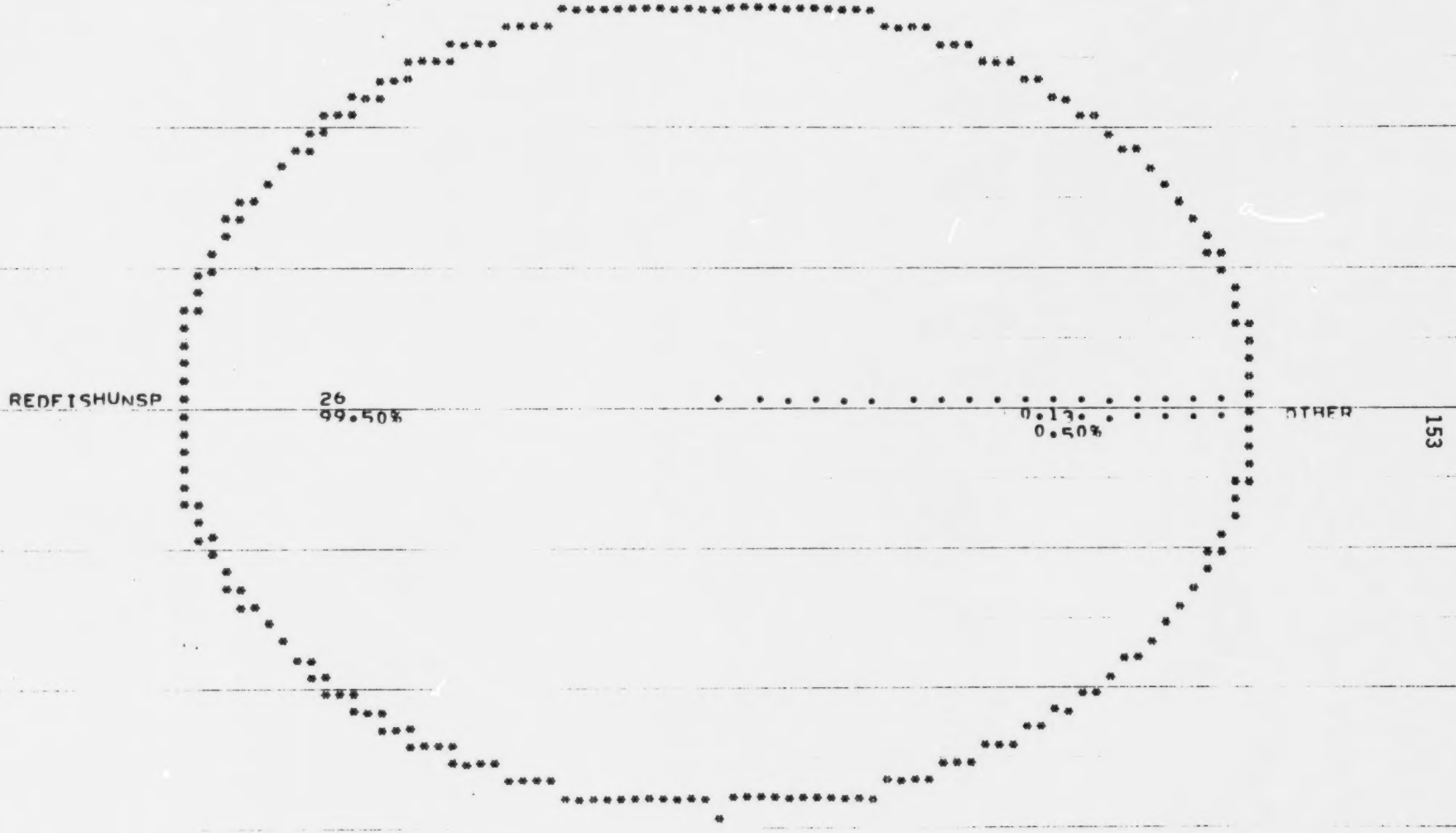


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=NOV NAFO=3K UNITAREA=347

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

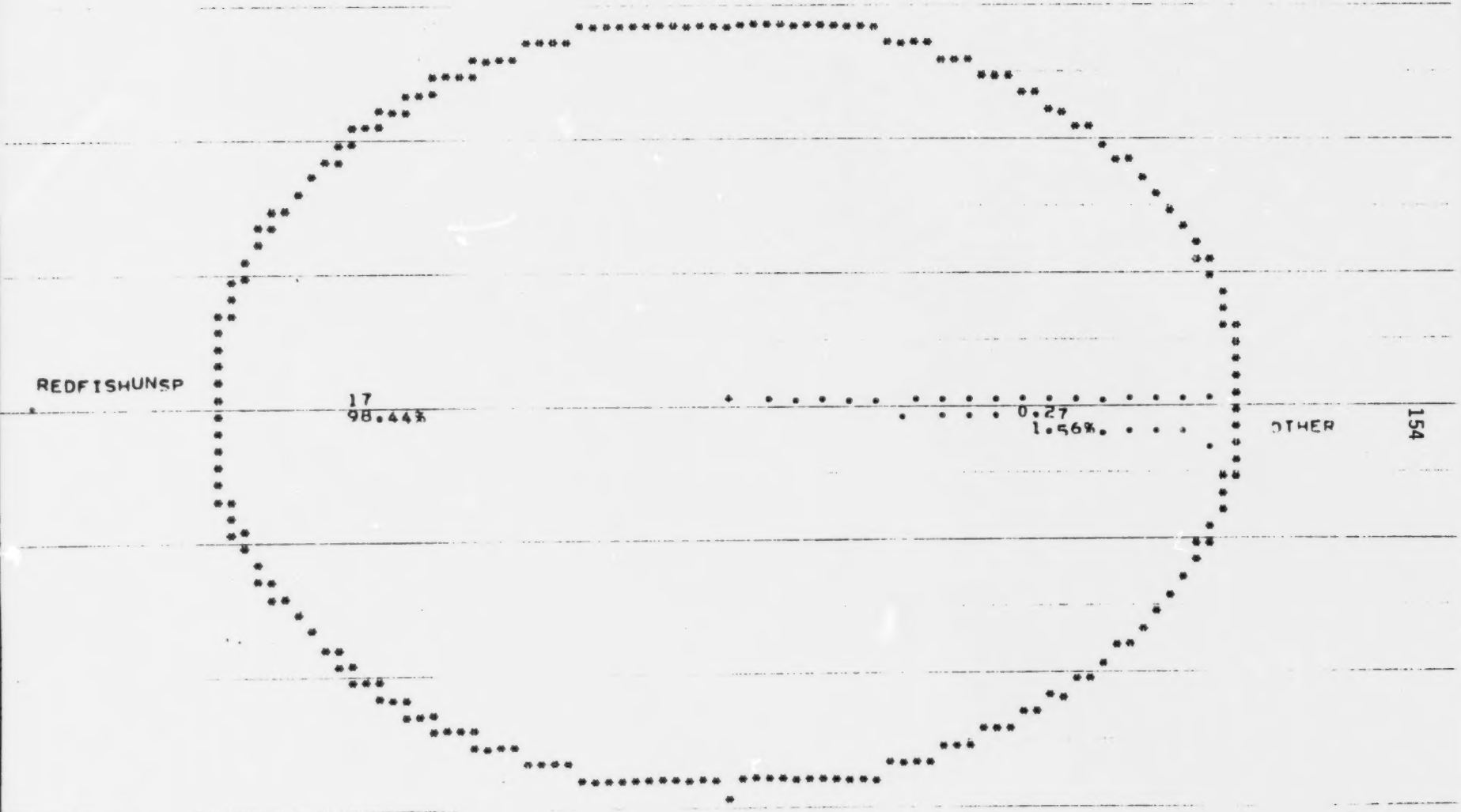


Fig. 2. SPECIES COMPOSITION.TURBOT FISHERY.1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=DEC NAFO=2J UNITAREA=2G6

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

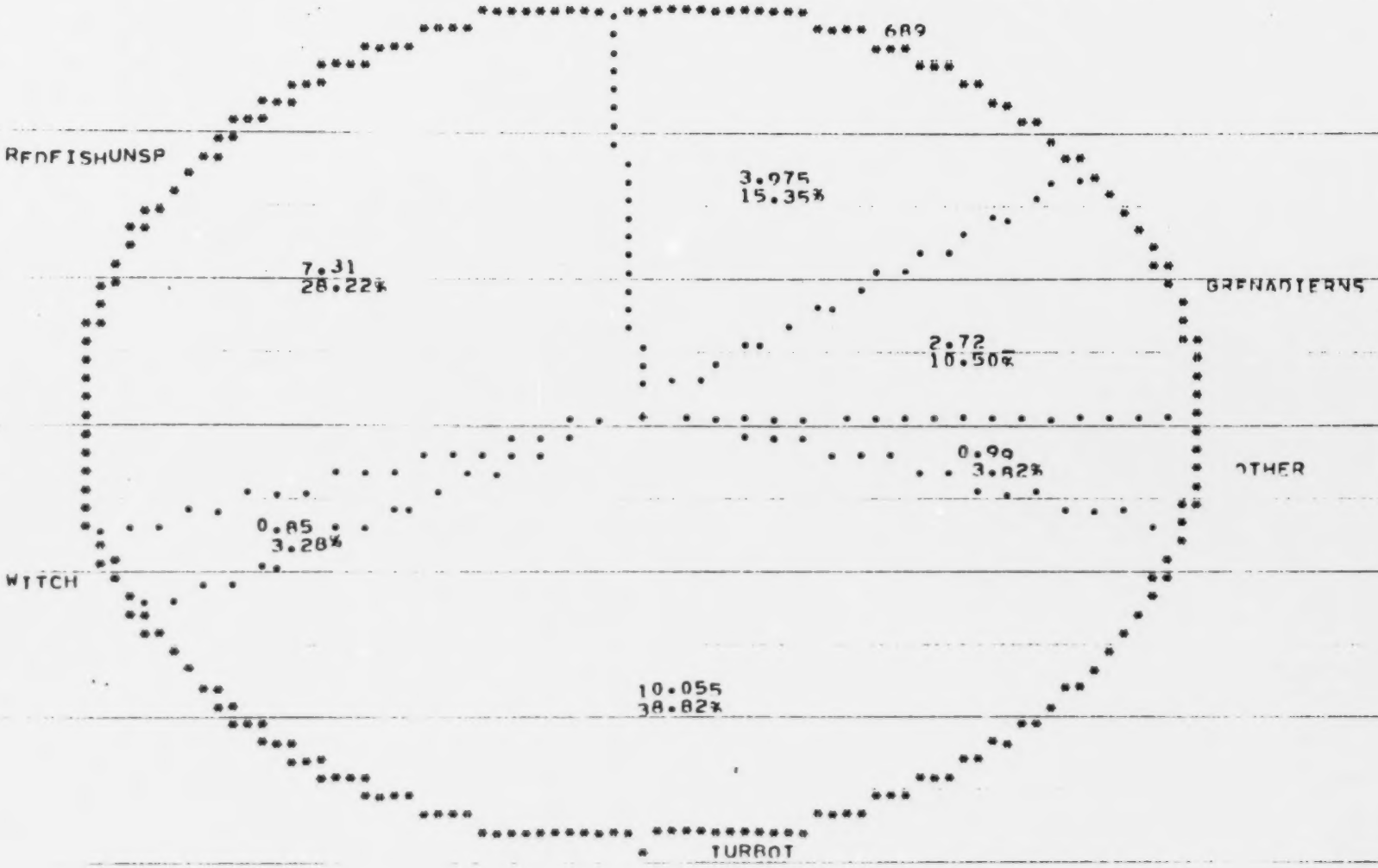


Fig. 2. SPECIES COMPOSITION,TURBOT FISHERY,1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=DEC NAFO=2J UNITAREA=207

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

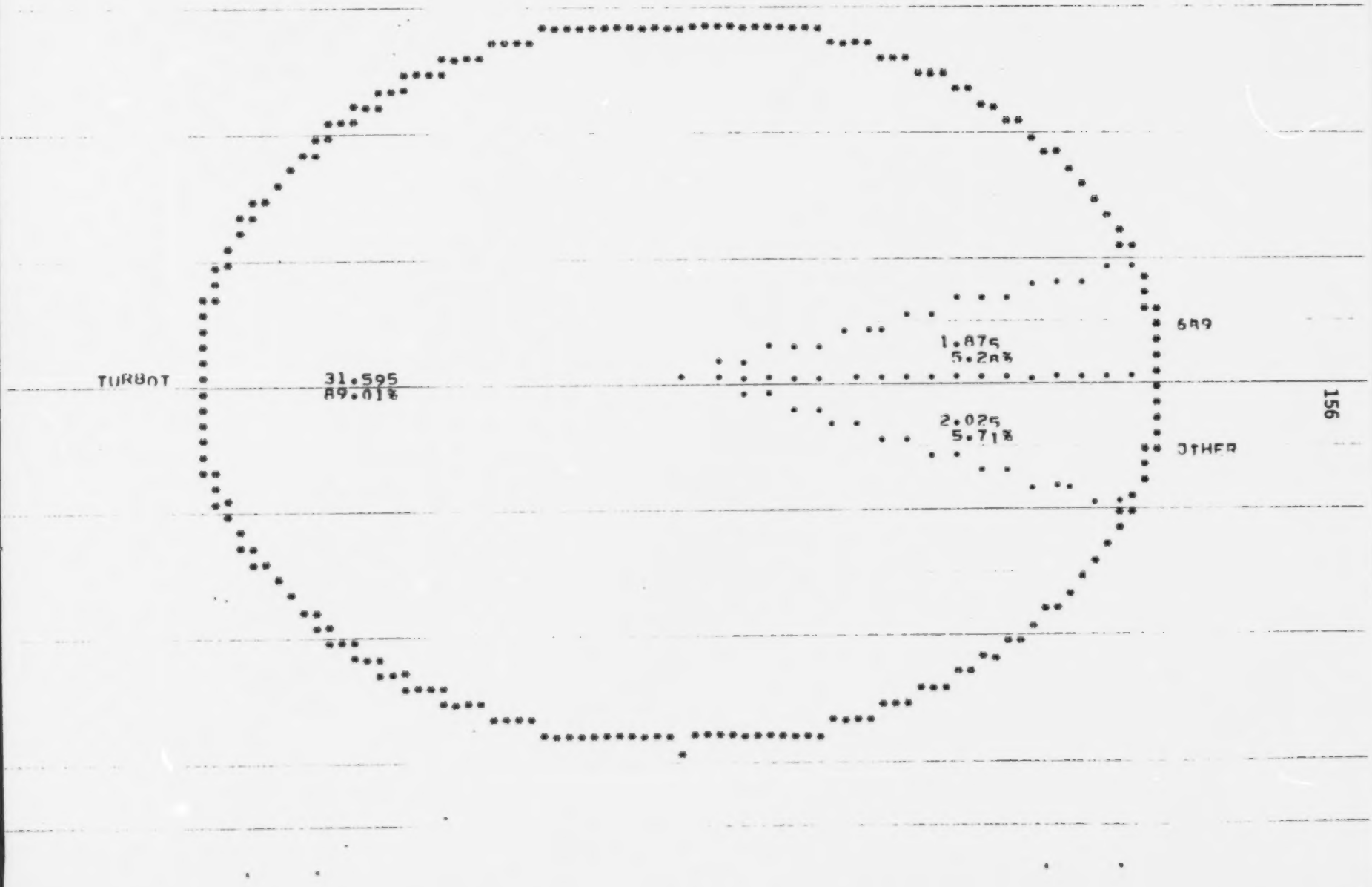


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=DEC NAFO=2J UNITAREA=210

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

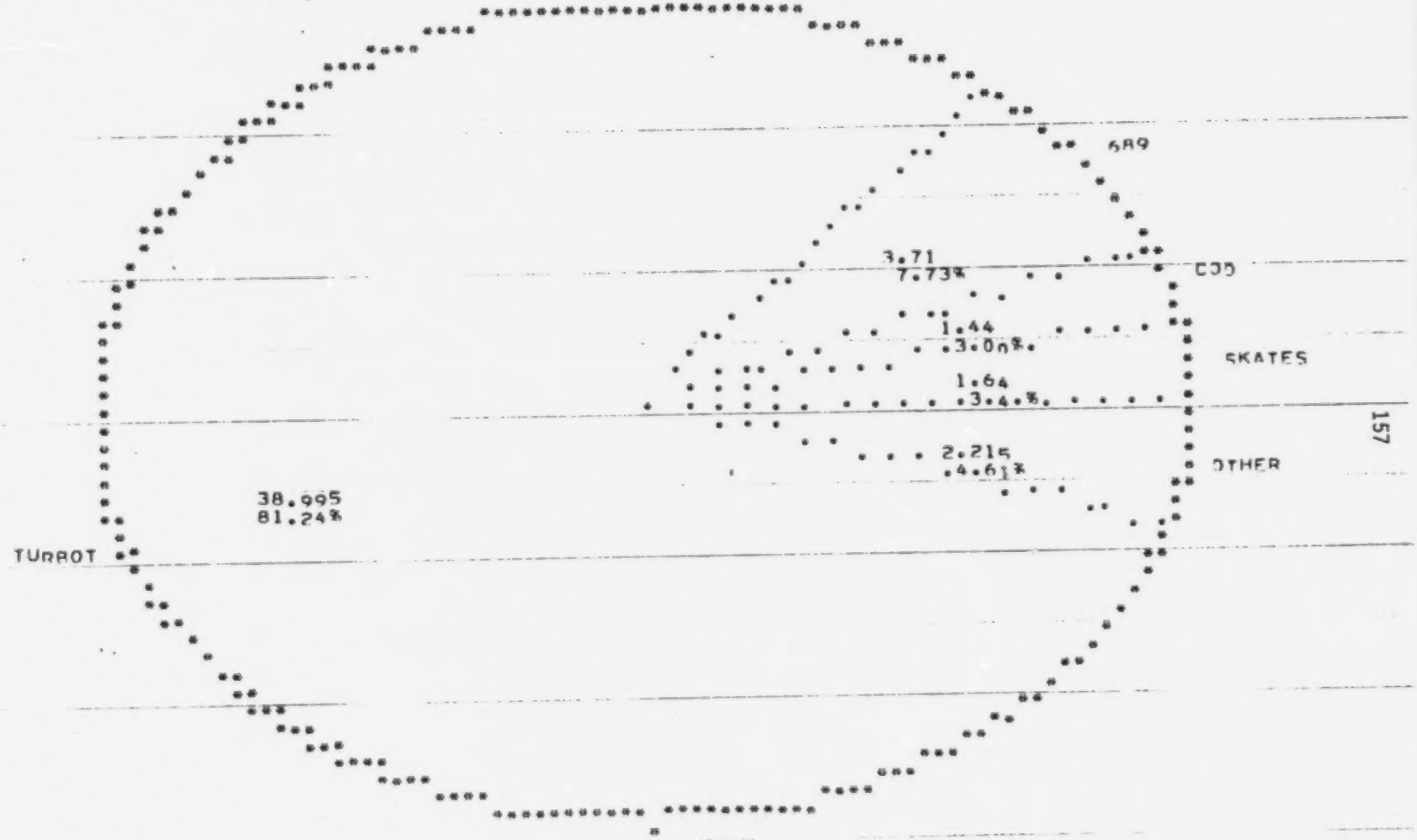


Fig. 2. SPECIES COMPOSITION.TURBOT FISHERY.1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=MAY NAFO=3K UNITAREA=339

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

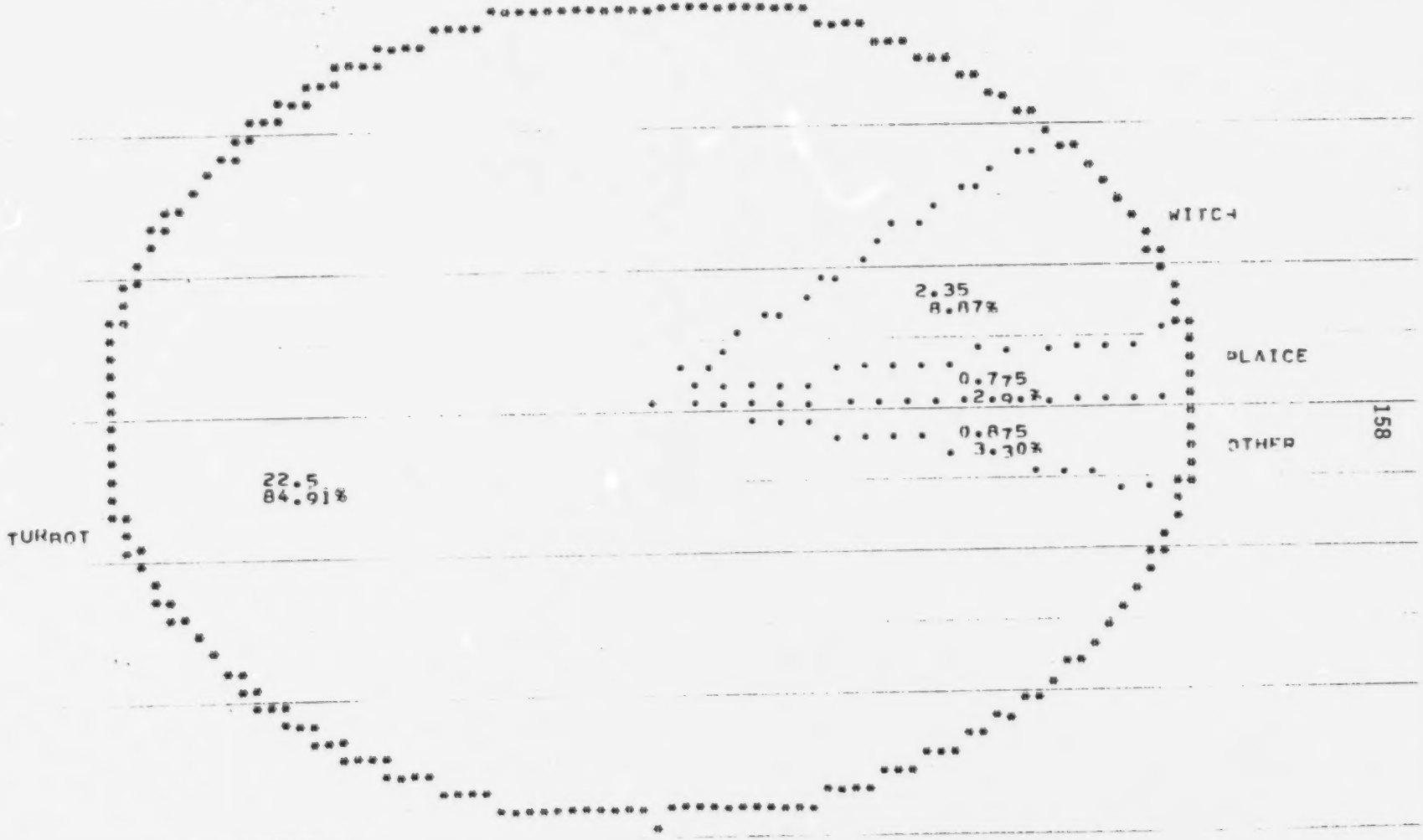


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=MAY NAFO=3K UNITAREA=344

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

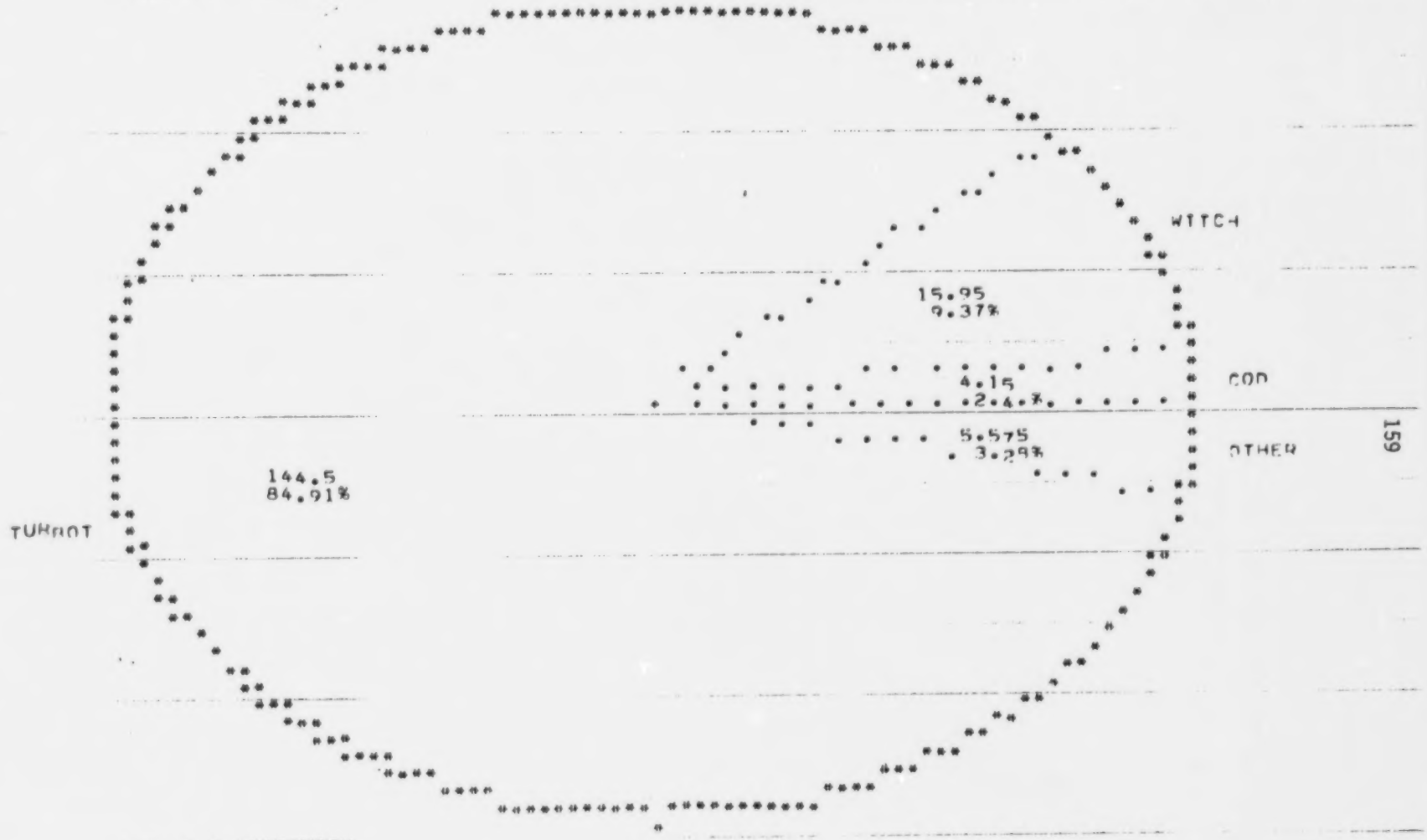


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=MAY NAFO=3K UNITAREA=345

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

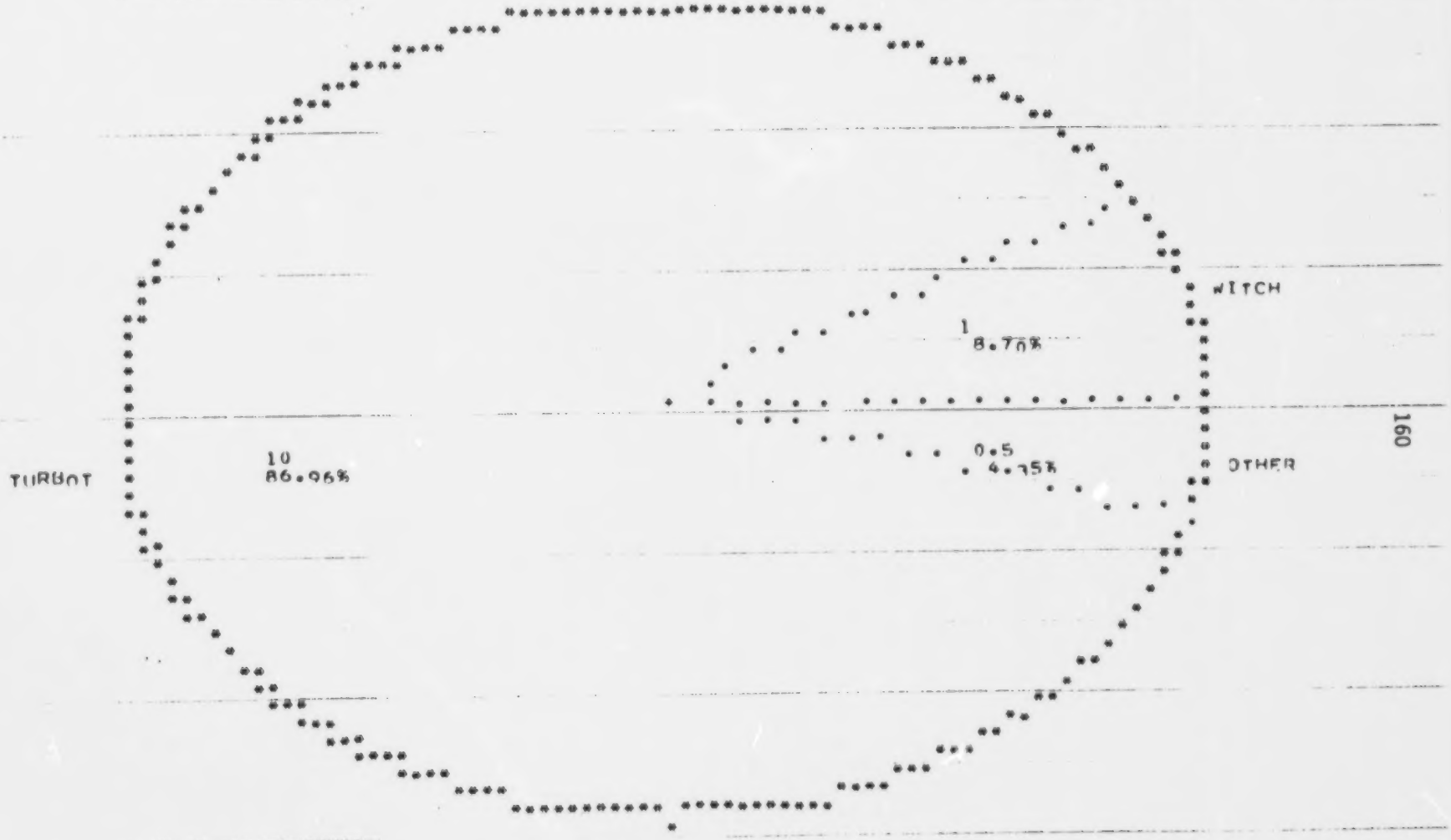


Fig. 2. SPECIES COMPOSITION.TURBOT FISHERY.1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=JUNE NAFO=3K UNITAREA=339

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

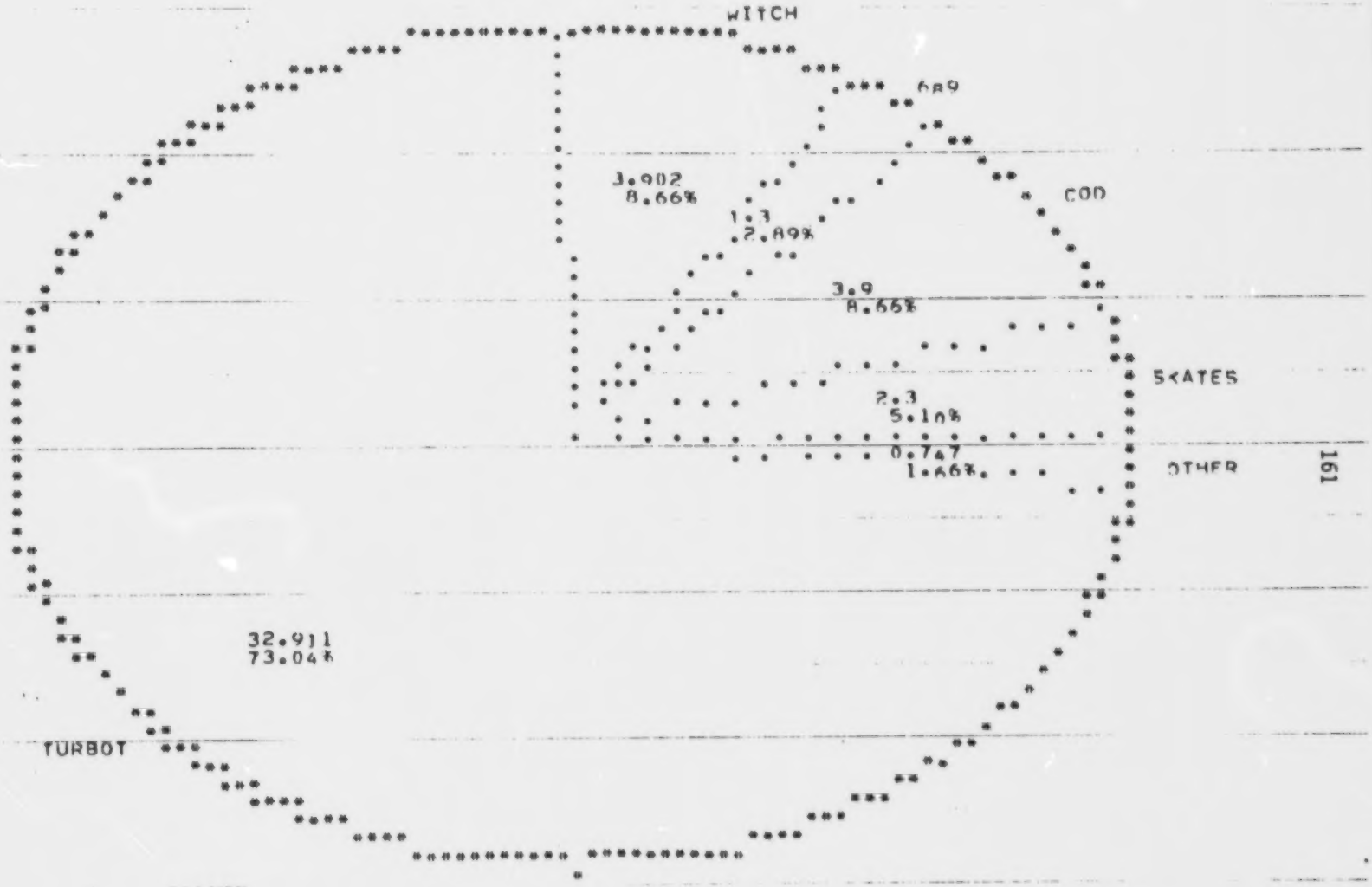


Fig. 2, SPECIES COMPOSITION,TURBOT FISHERY,1984
DIRECT=TURBOT COUNTRY=POLAND MONTH=JUNE NAFO=3K UNITAREA=344
SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

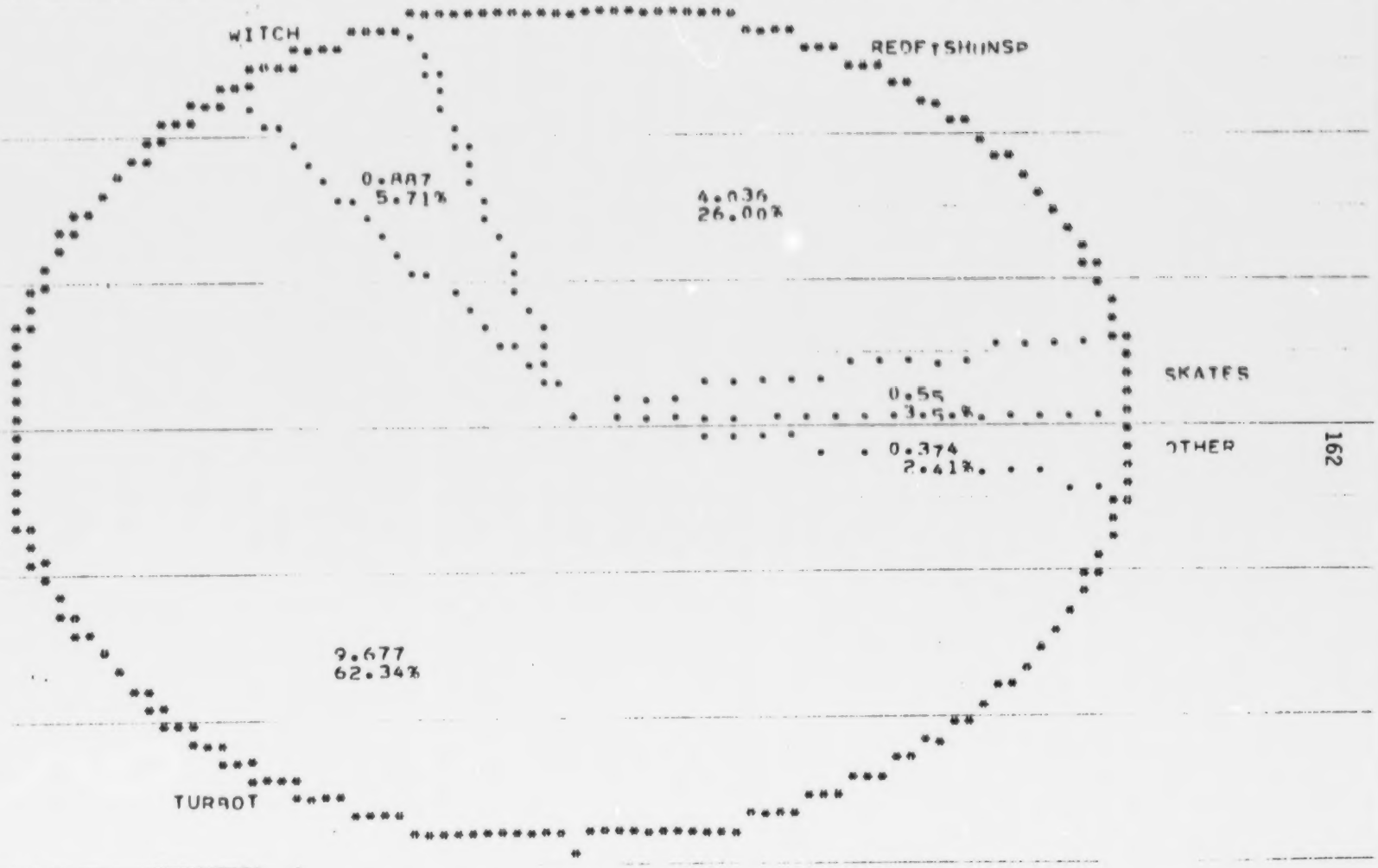


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=JUNE NAFO=3K UNITAREA=347

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

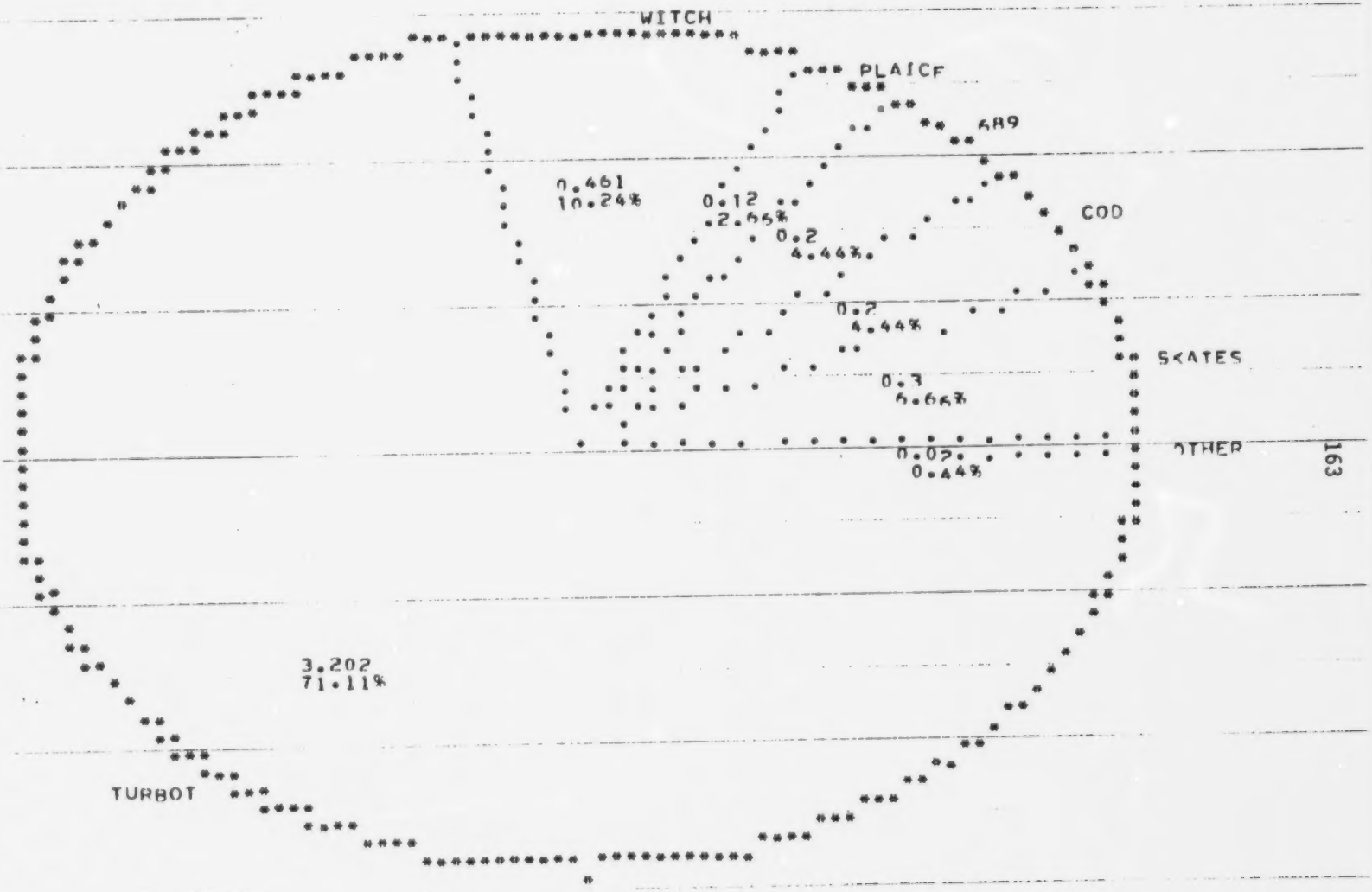


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2G UNITAREA=.

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

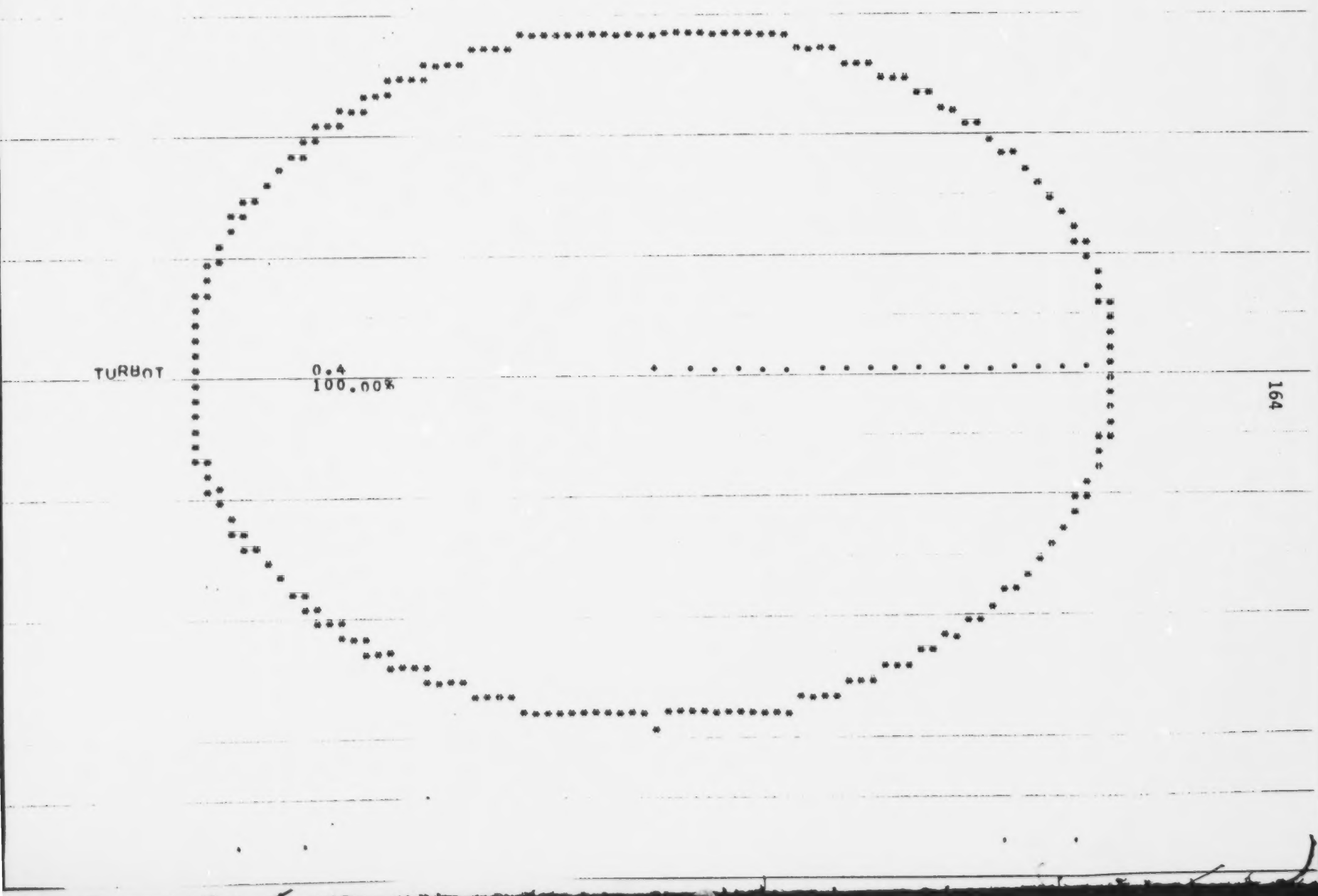


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2H UNITAREA=212

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

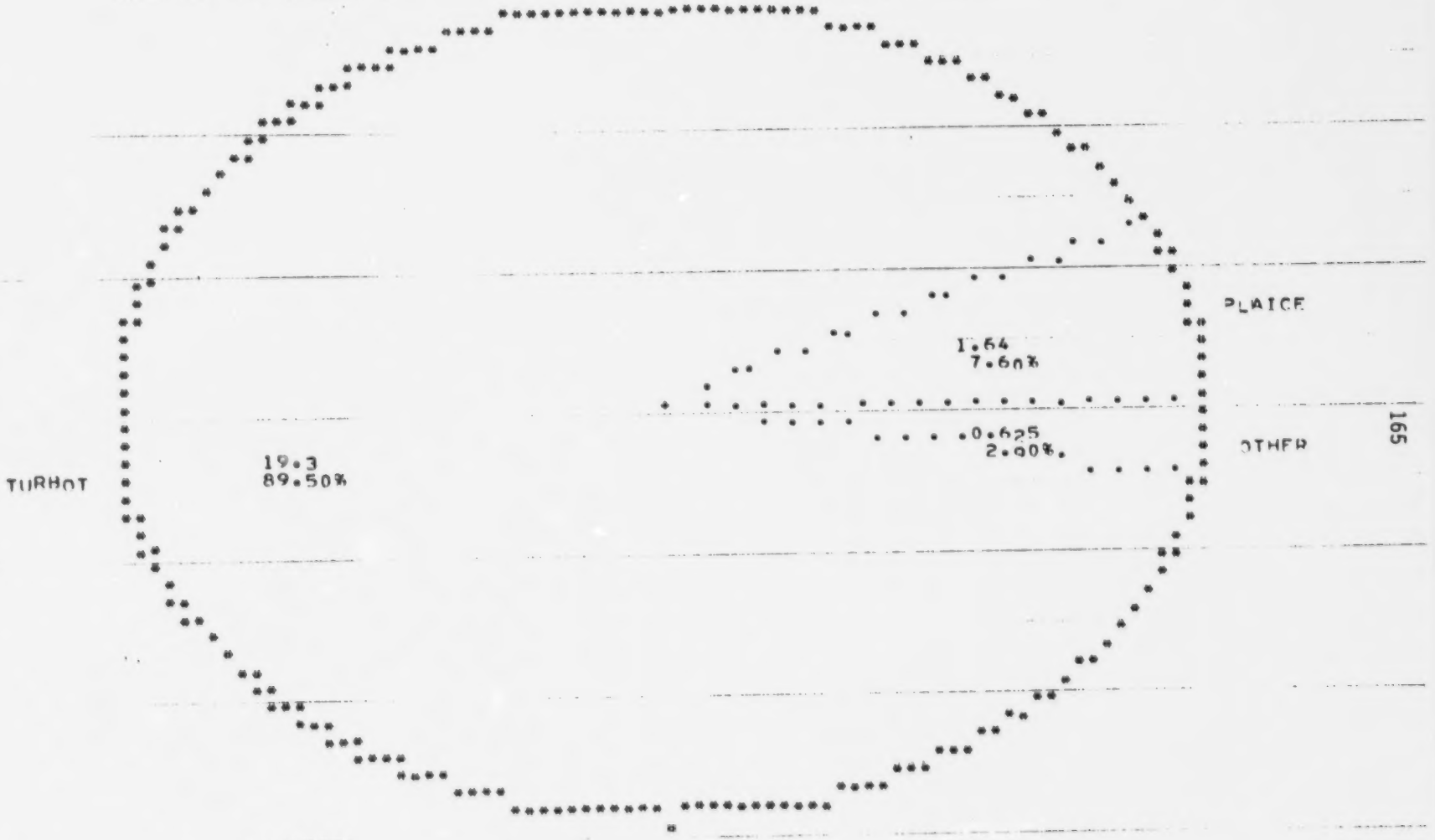


Fig. 2. SPECIES COMPOSITION,TURBOT FISHERY,1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2H UNITAREA=213

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

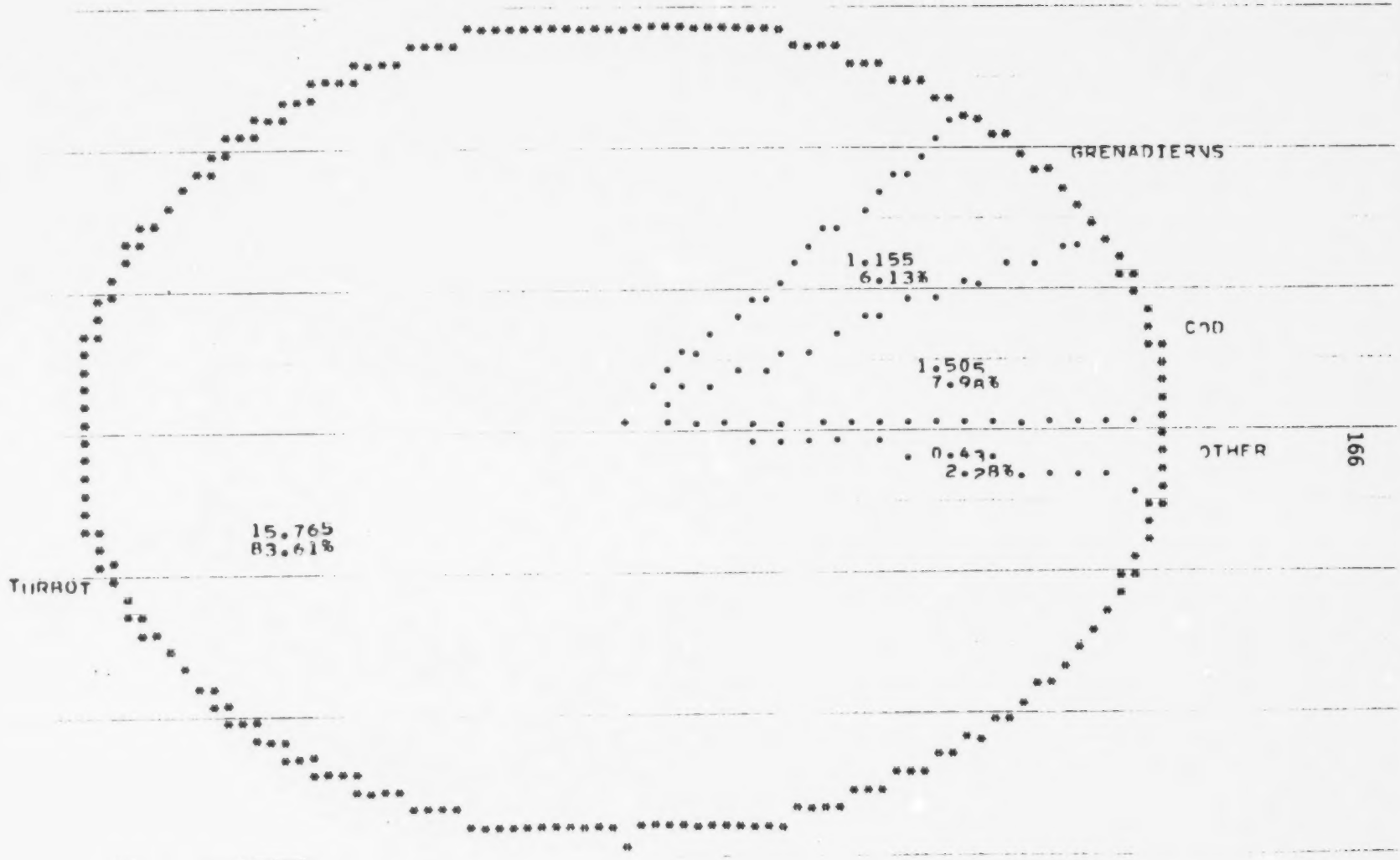


Fig. 2. SPECIES COMPOSITION.TURBOT FISHERY.1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2H UNITAREA=215

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

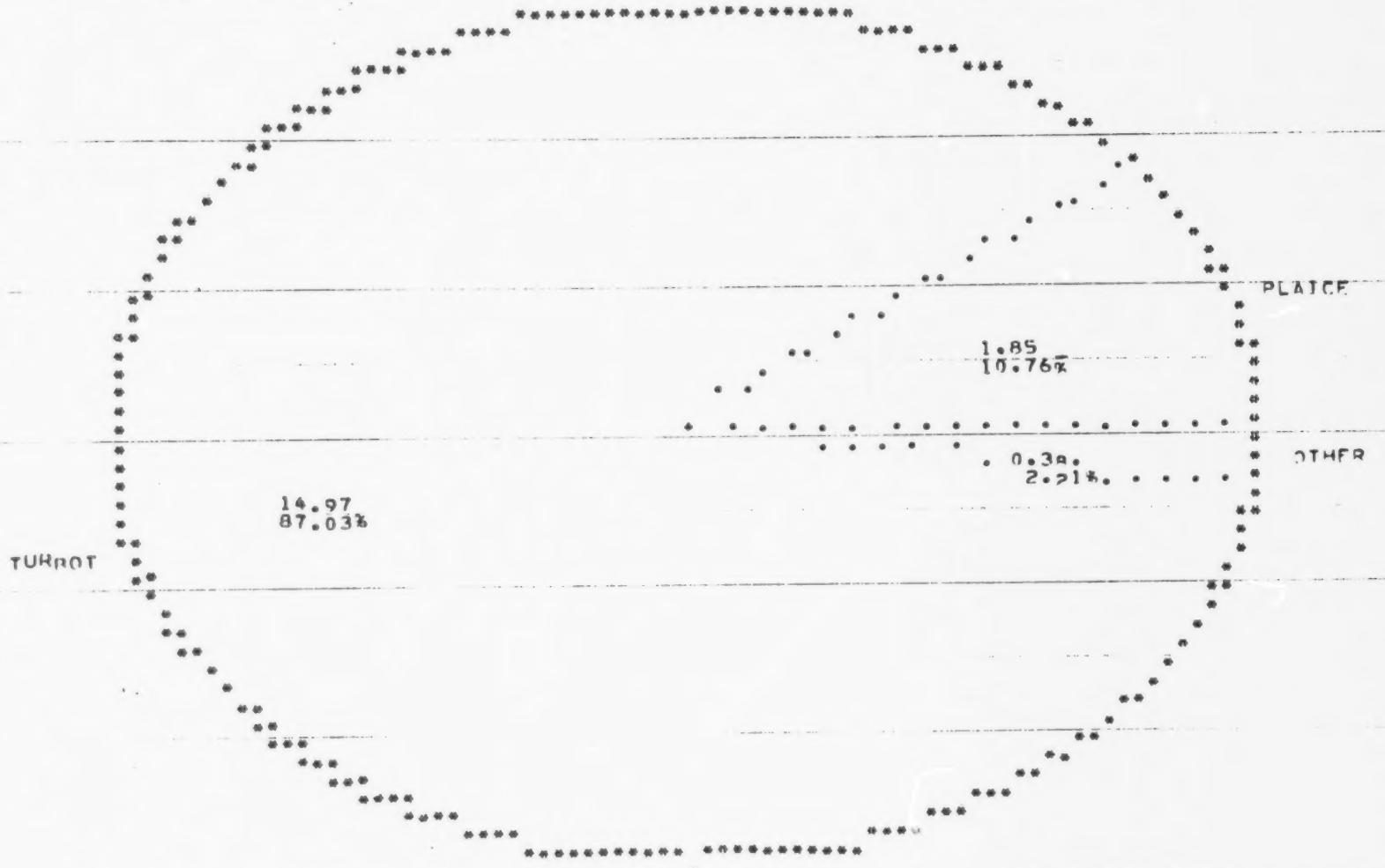


Fig. 2. SPECIES COMPOSITION,TURBOT FISHERY,1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2H UNITAREA=214

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

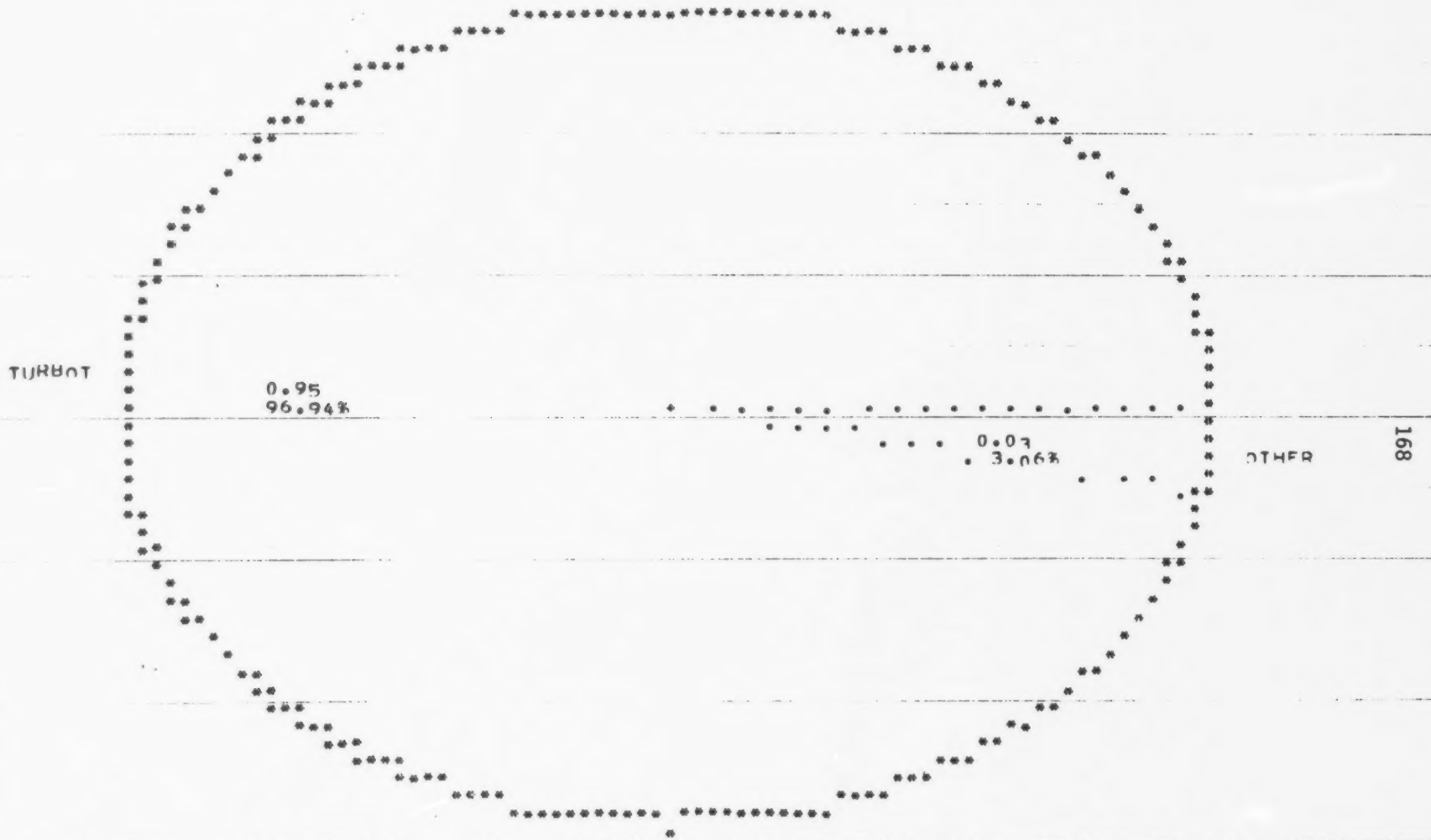


Fig. 2. SPECIES COMPOSITION,TURBOT FISHERY,1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=DEC NAFO=2H UNITAREA=212

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

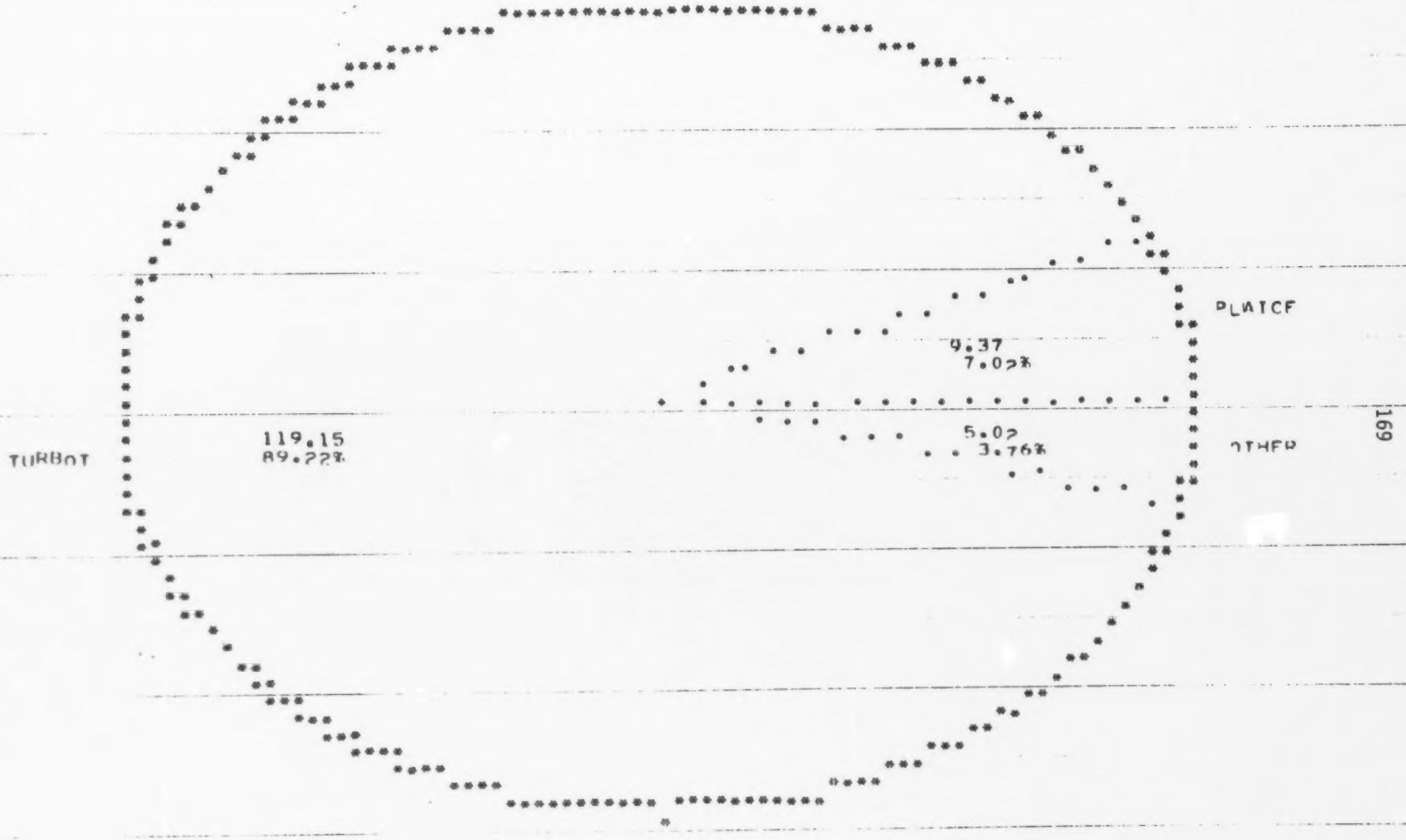


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=DEC NAFO=2H UNITAREA=213

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

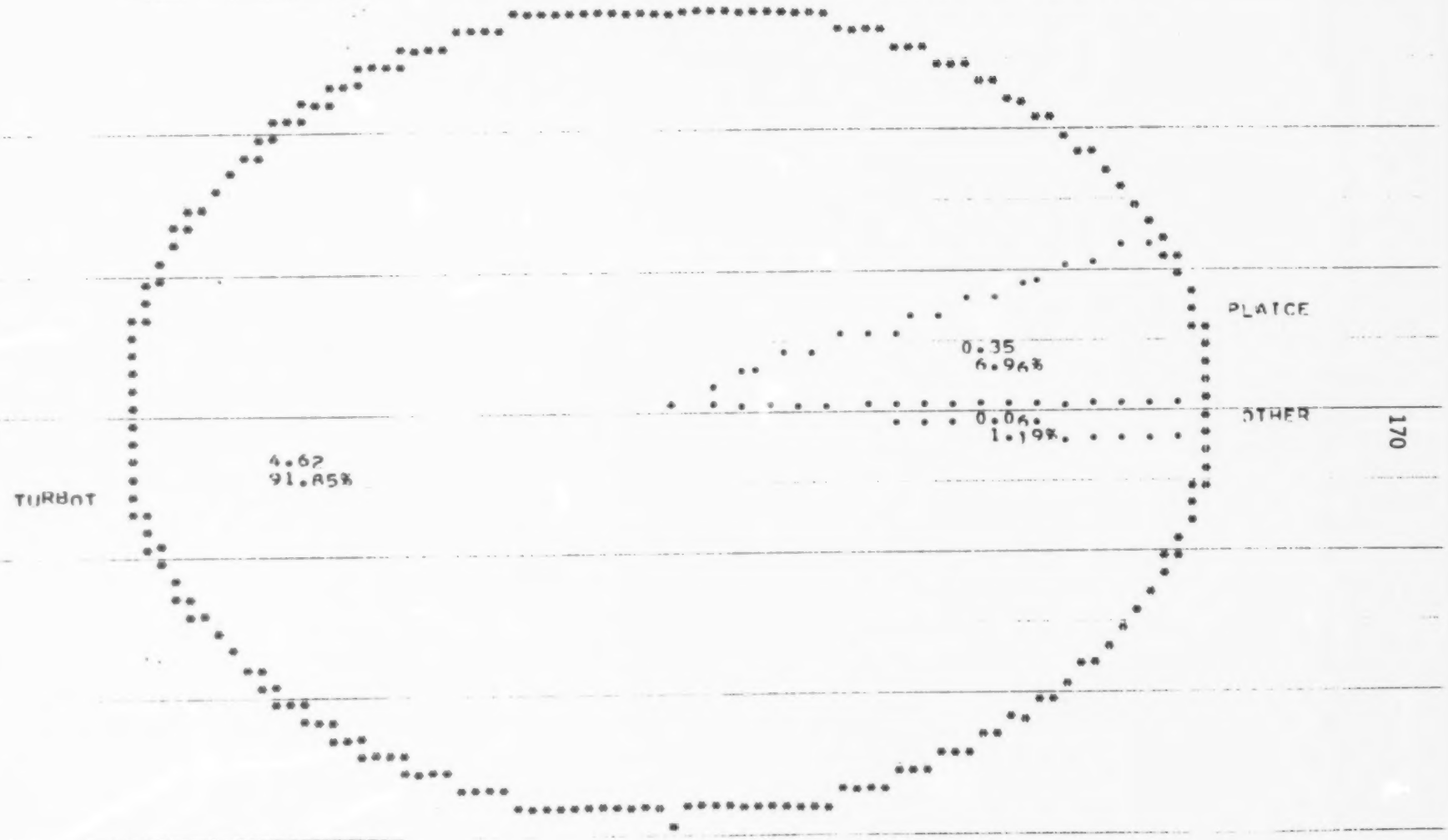


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=DEC NAFO=2H UNITAREA=215

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

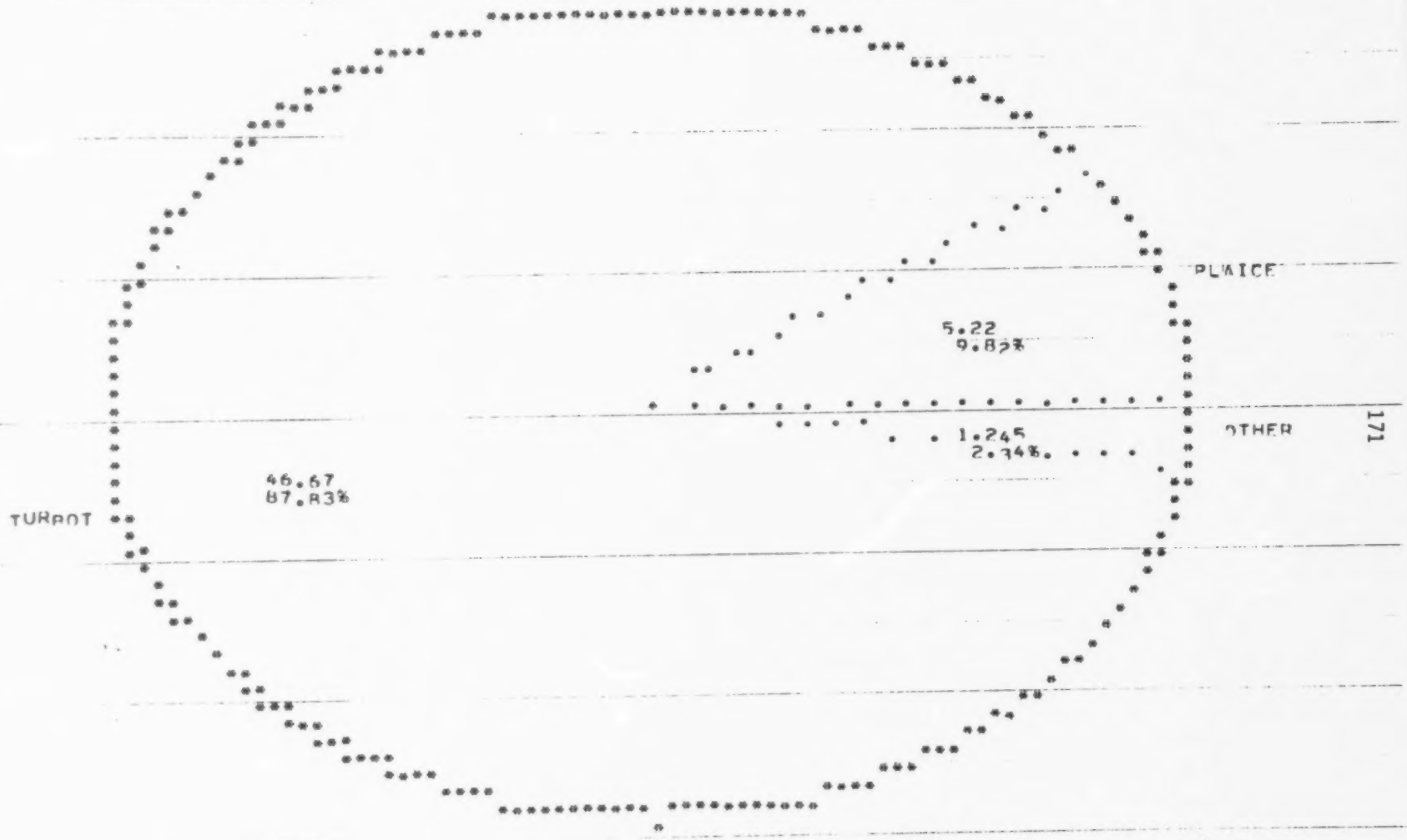


Fig. 2. SPECIES COMPOSITION, TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=DEC NAFO=2H UNITAREA=21A

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

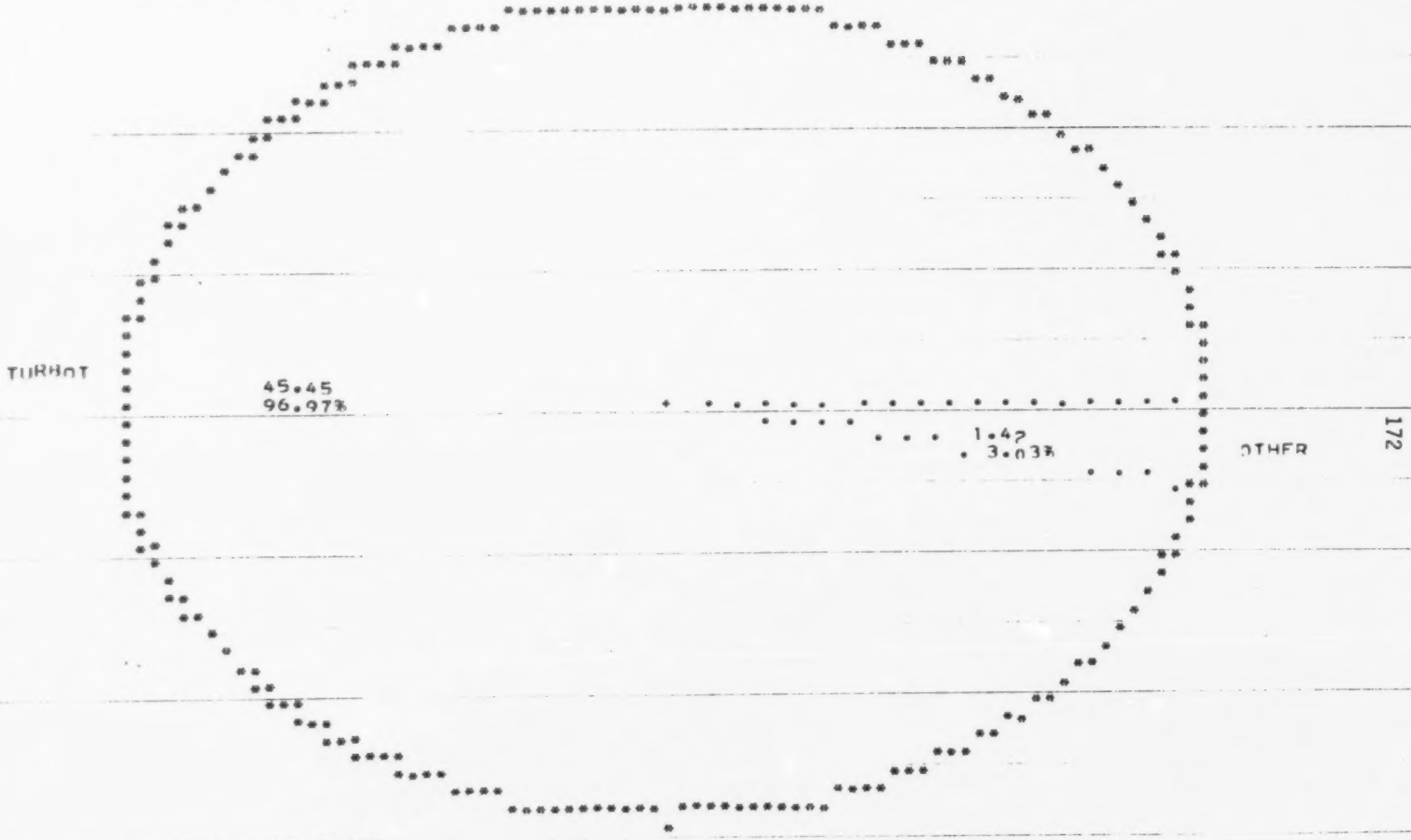


Fig. 2. SPECIES COMPOSITION.TURBOT FISHERY.1984

DIRECT=TURBOT COUNTRY=PORTUGAL MONTH=DEC NAFO=3L UNITAREA=330

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

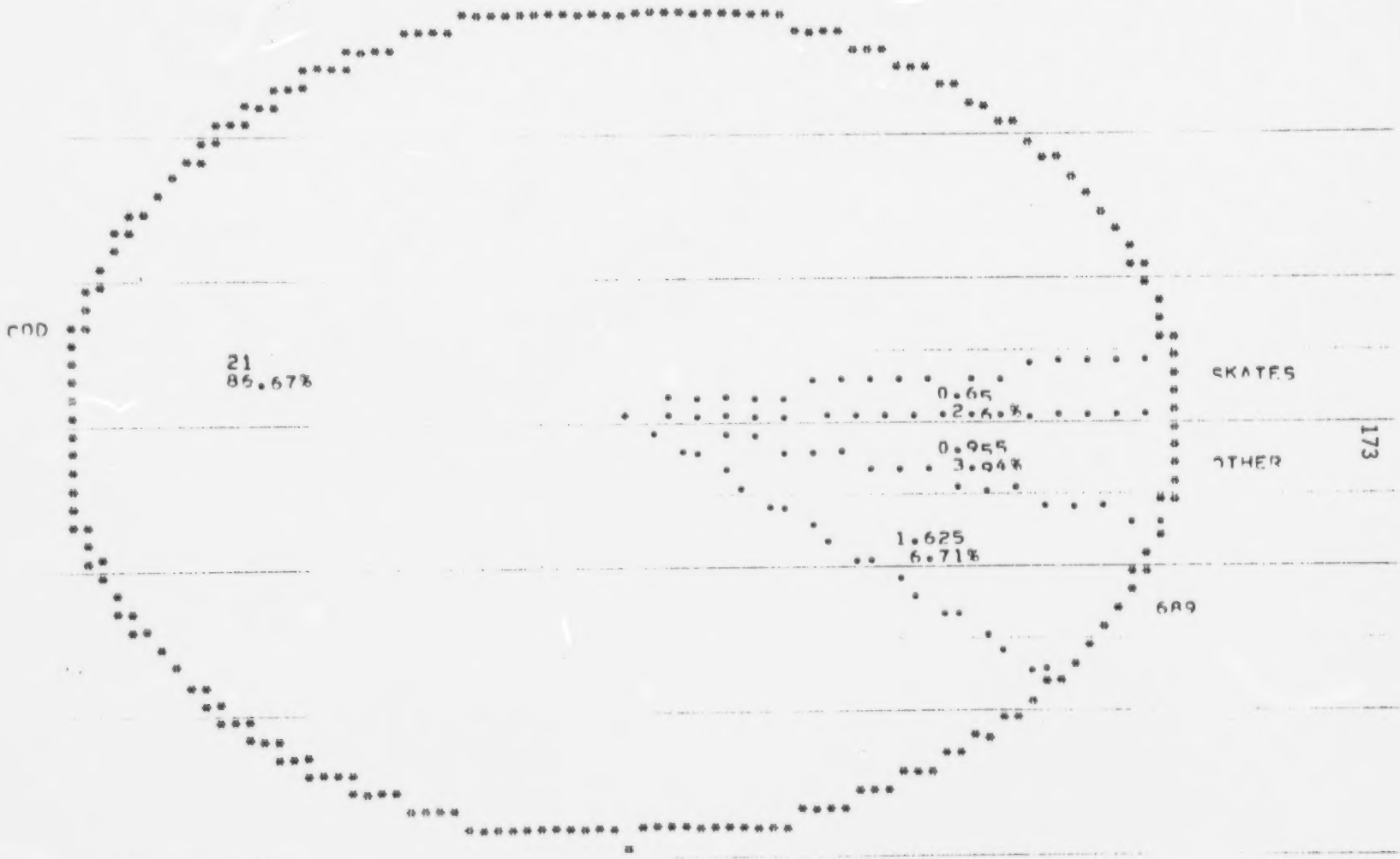
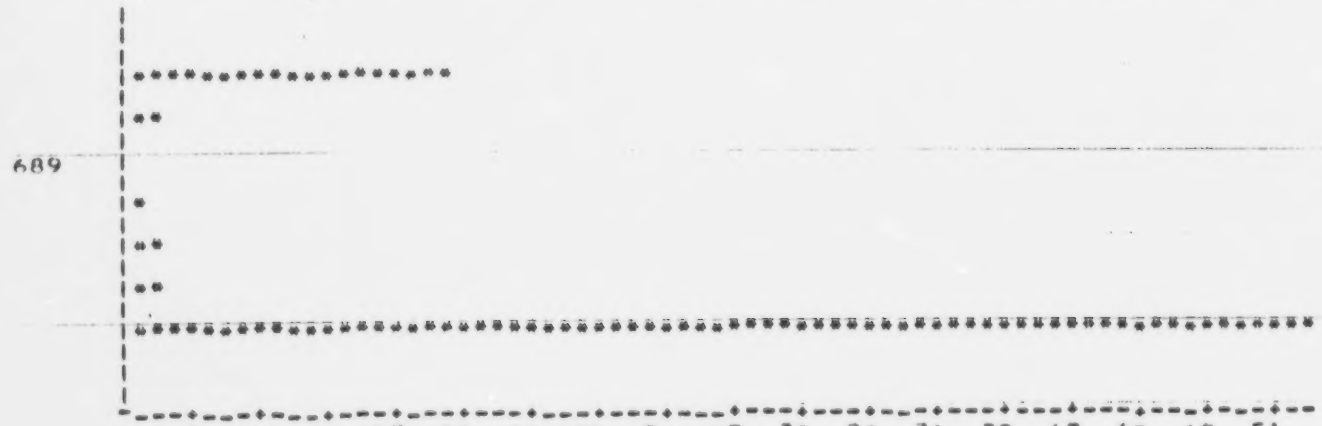


Fig. 2. SPECIES COMPOSITION,GILLNET TURBOT FISHERY,1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2J UNITAREA=2J2

BAR CHART OF SUMS



SPECIES	FREQ	CATCHWT SUM
SKATES	5	0.25000
COD	9	14.60000
RNGRENADIER	7	1.75000
689	8	0.35000
REDFISHUNSP	6	0.77000
PLAICE	7	1.86000
WITCH	9	1.65000
TURBOT	9	52.17000
CANCERNS	4	0.10000

Fig. 2. SPECIES COMPOSITION.GILLNET TURBOT FISHERY.1984
DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2J UNITAREA=203
SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

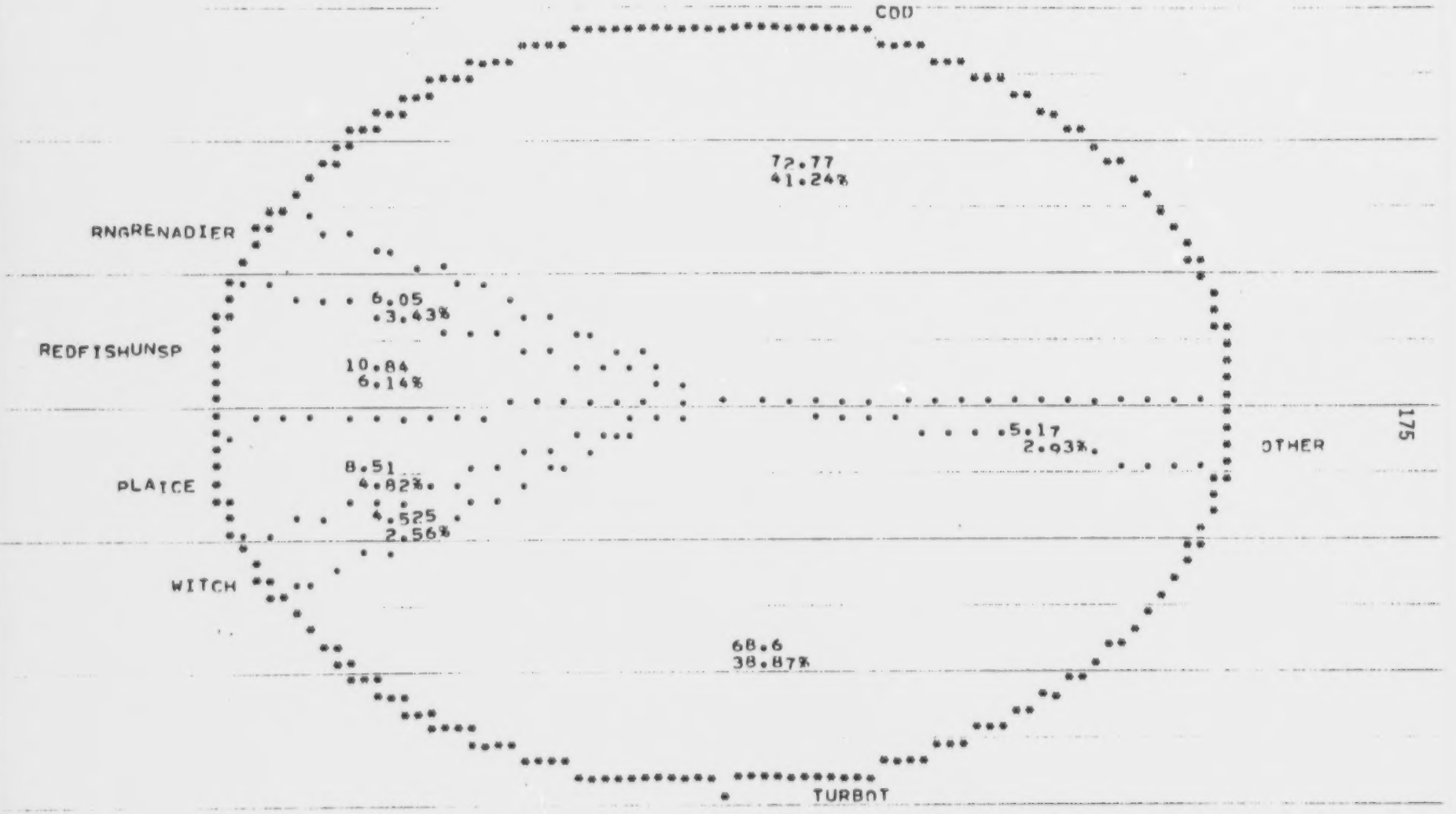


Fig. 2. SPECIES COMPOSITION,GILLNET TURBOT FISHERY,1984
DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2J UNITAREA=204
SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

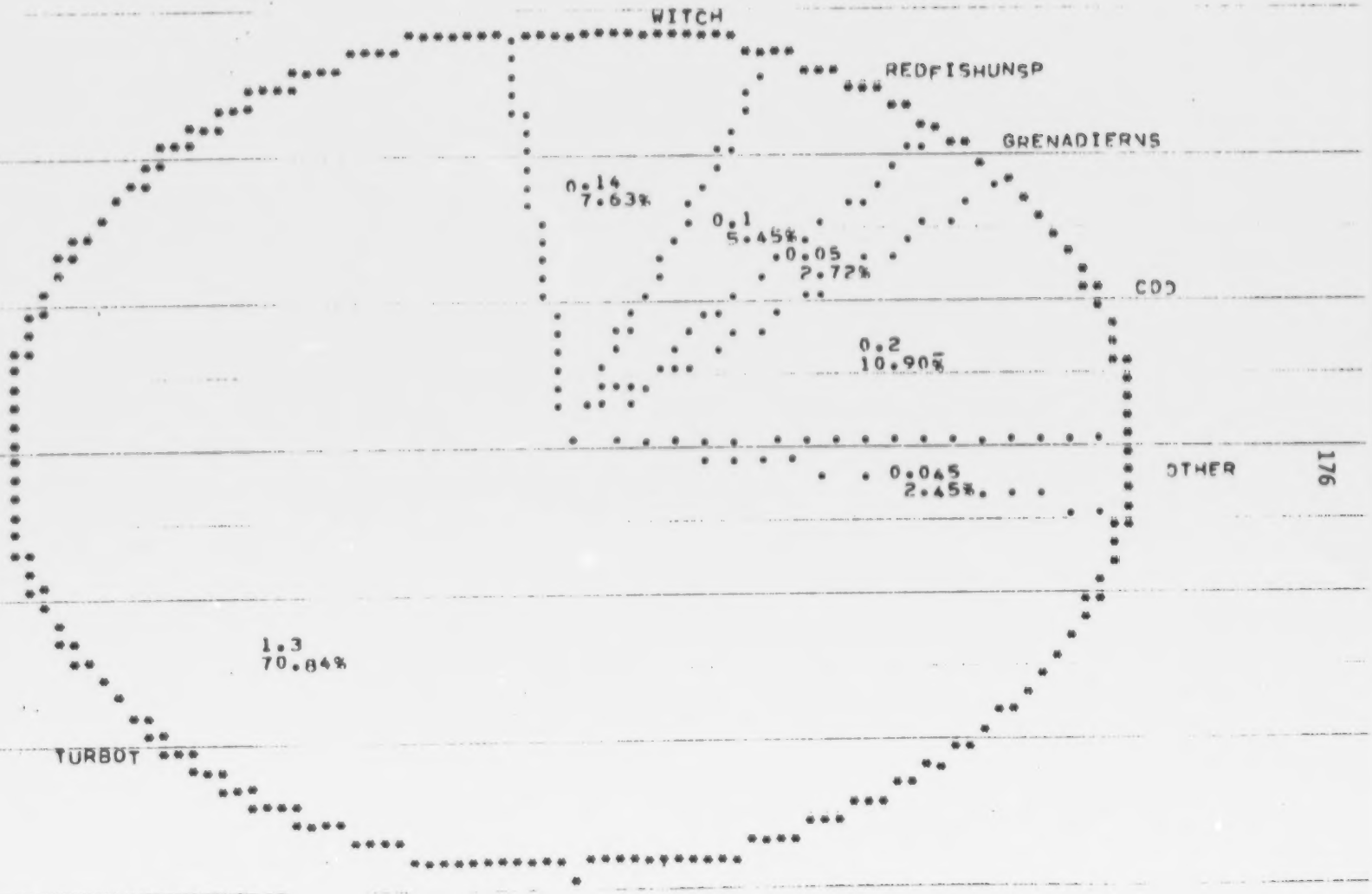


Fig. 2. SPECIES COMPOSITION, GILLNET TURBOT FISHERY, 1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2J UNITAREA=202

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

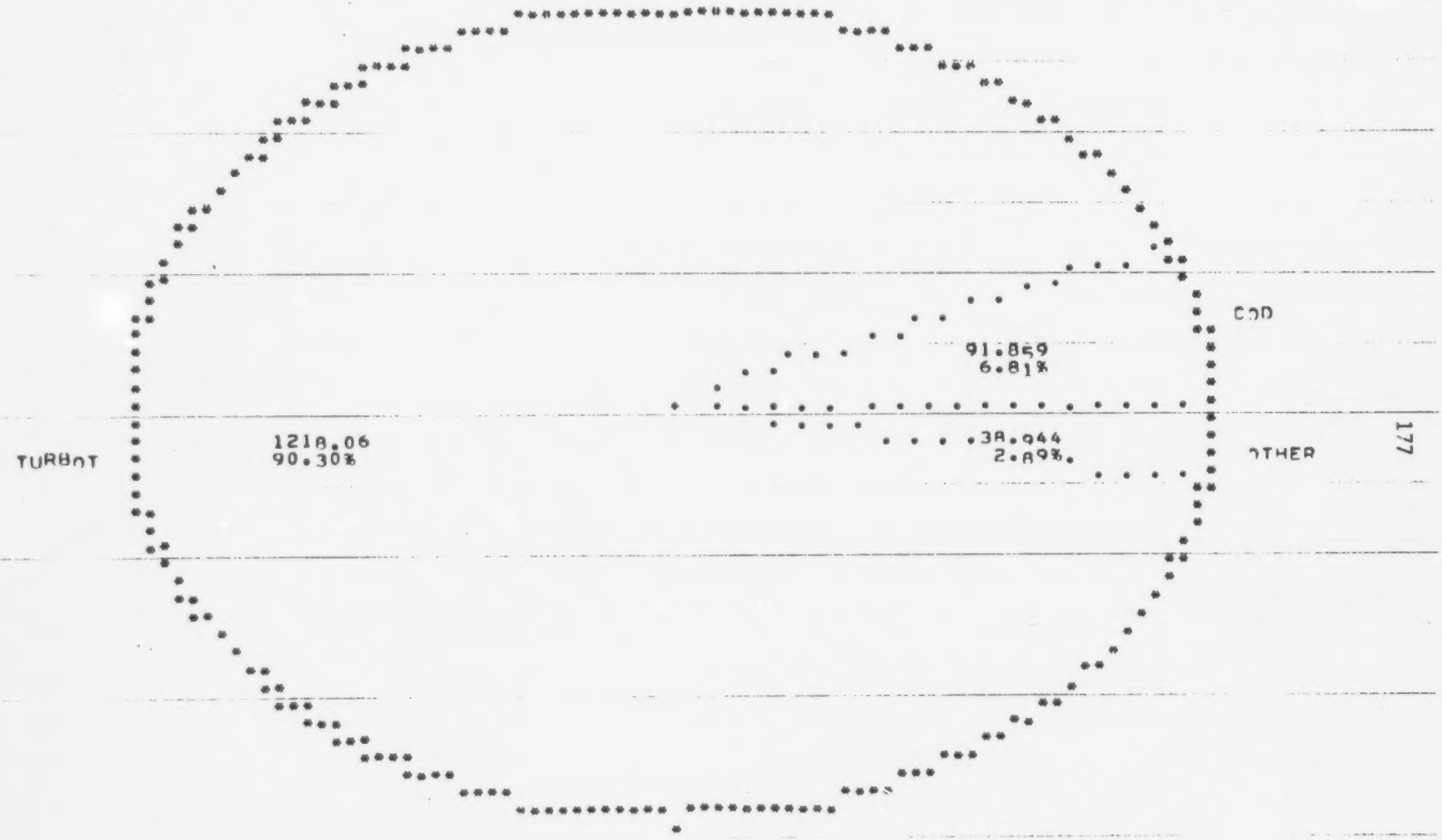


Fig. 2. SPECIES COMPOSITION,GILLNET TURBOT FISHERY,1984
DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=OCT NAFO=2J UNITAREA=202
SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

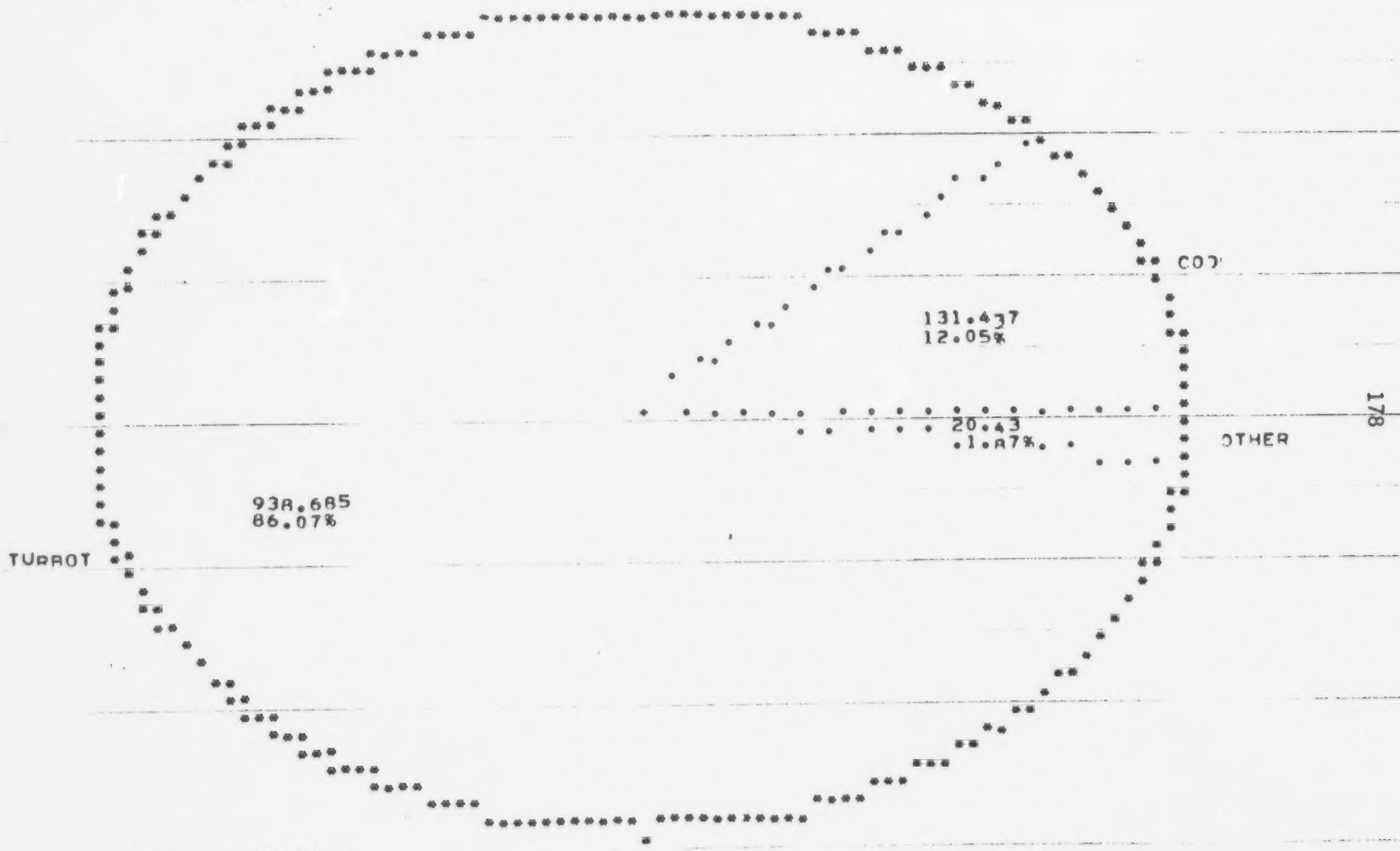


Fig. 2. SPECIES COMPOSITION,GILLNET TURBOT FISHERY,1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=OCT NAFO=2J UNITAREA=207

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

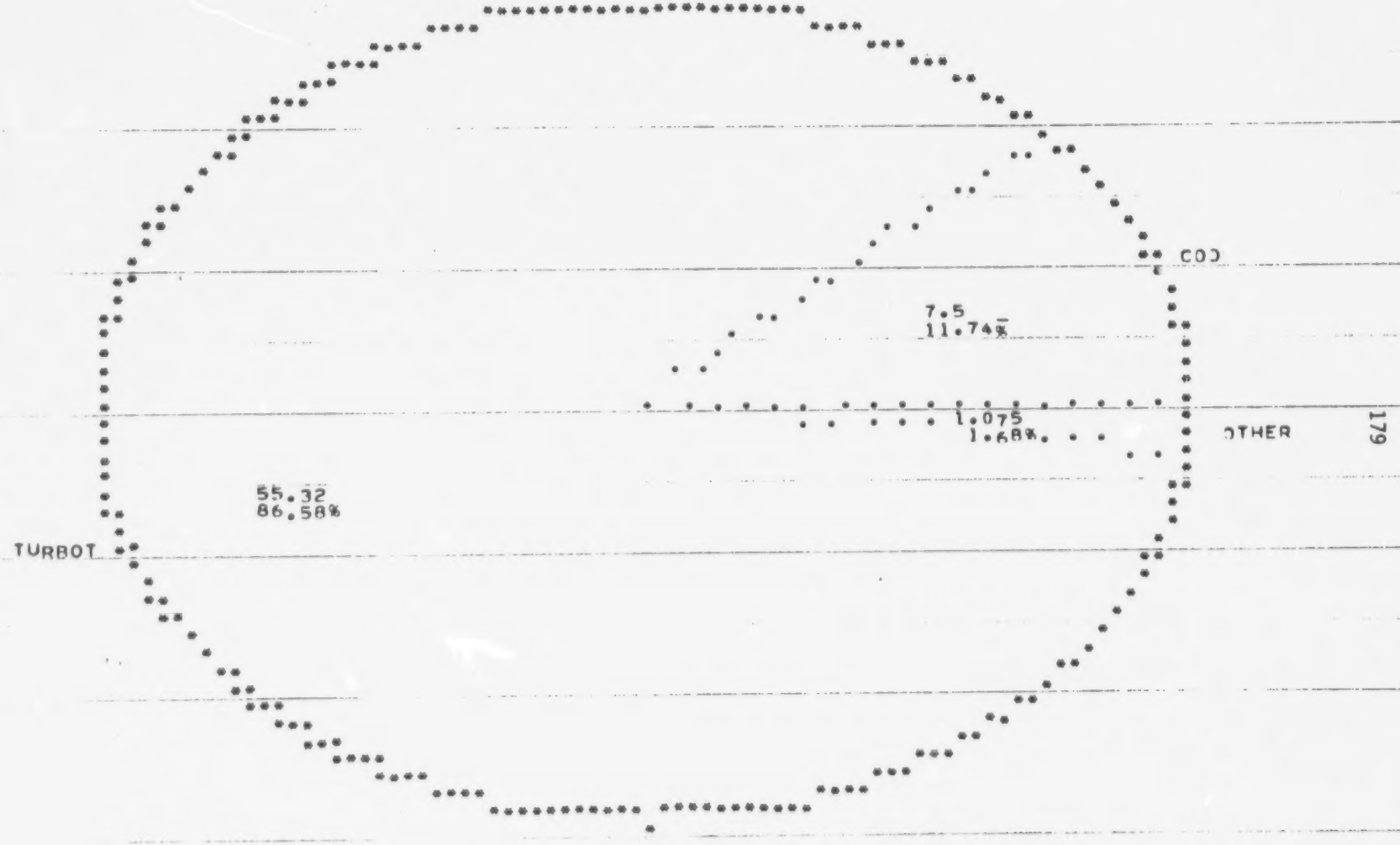


Fig. 2. SPECIES COMPOSITION,GILLNET TURBOT FISHERY,1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=NOV NAFO=2J UNITAREA=202

SUM PIE CHART OF CATCHWT GROUPED BY SPECIES

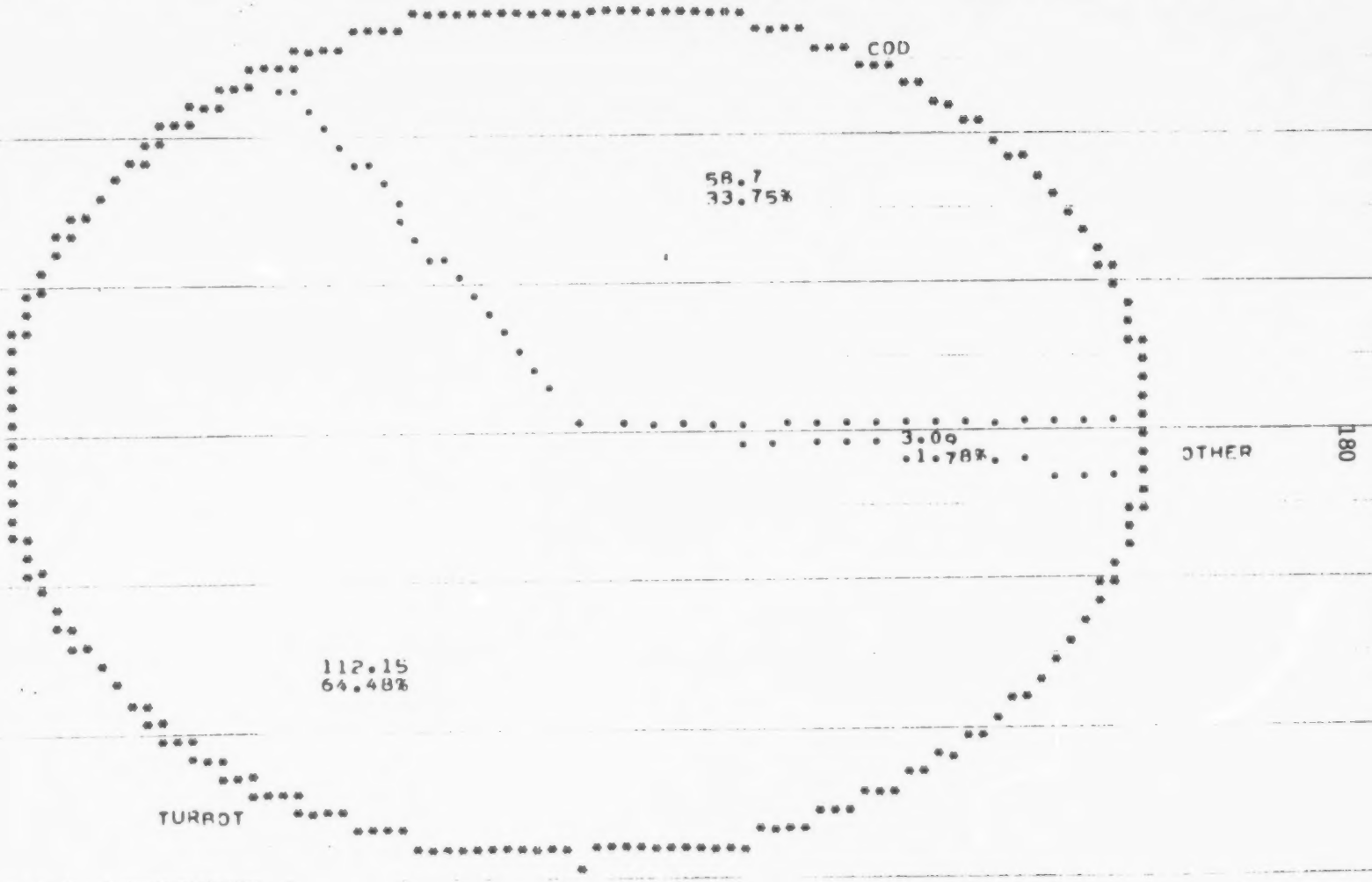


Fig. 3. CATCH PER HOUR AT DEPTH,1983

DIRECT=TURBOT COUNTRY=CANADA NFLD MONTH=JAN VAFO=3K

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

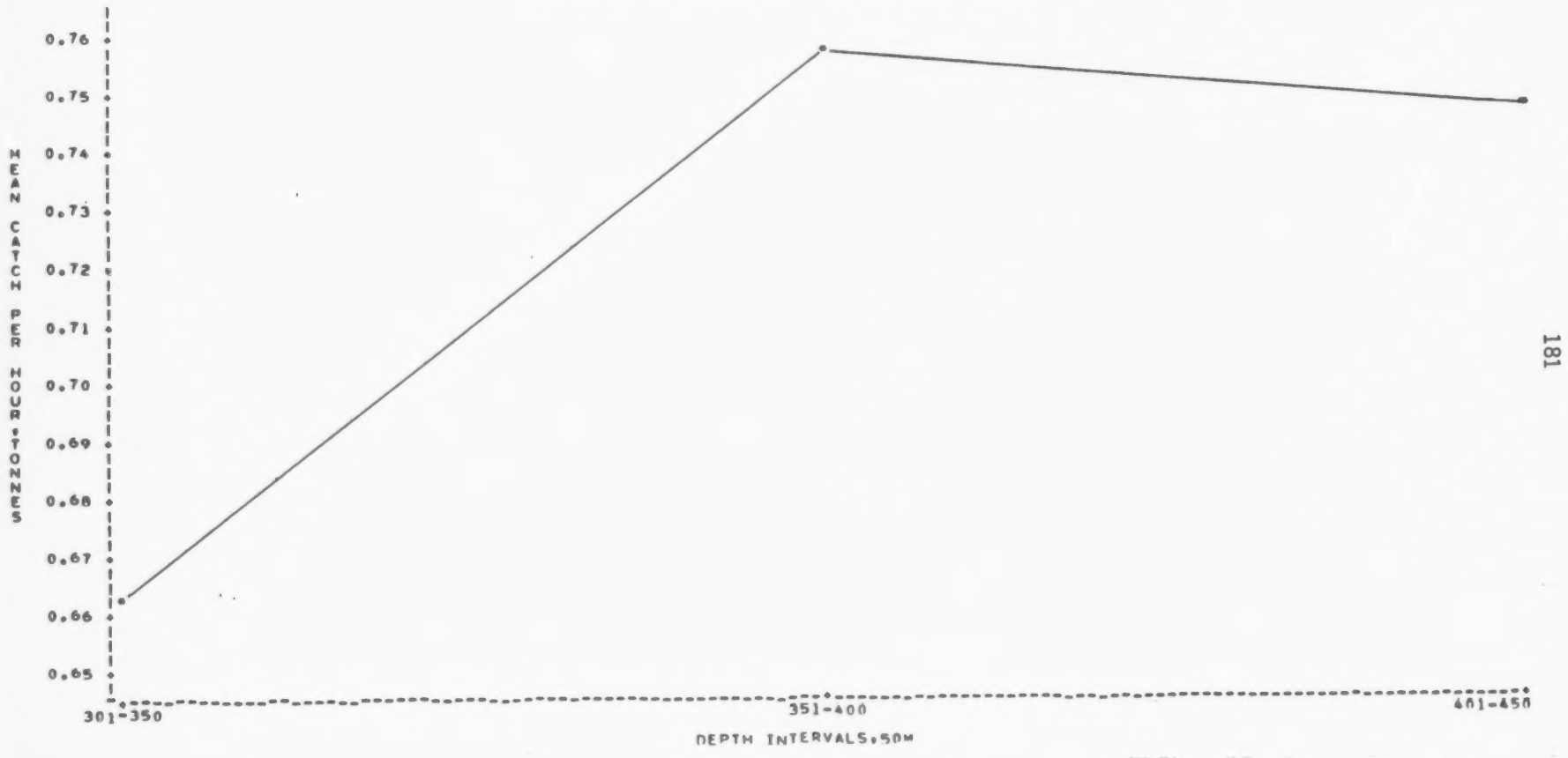


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=MAY NAFO=3K
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

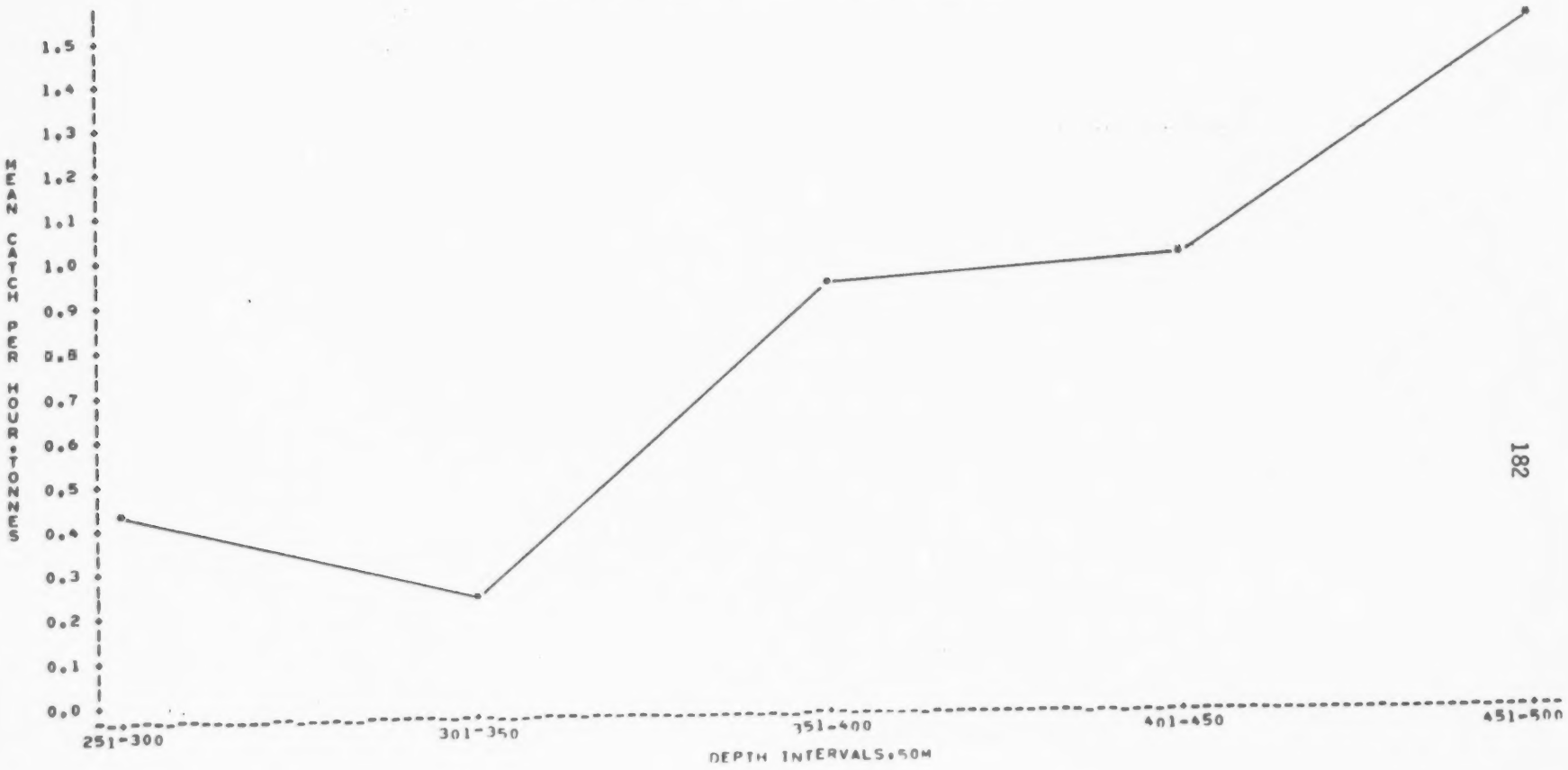


Fig. 3. CATCH PER HOUR AT DEPTH,1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JUNE NAFO=2J

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

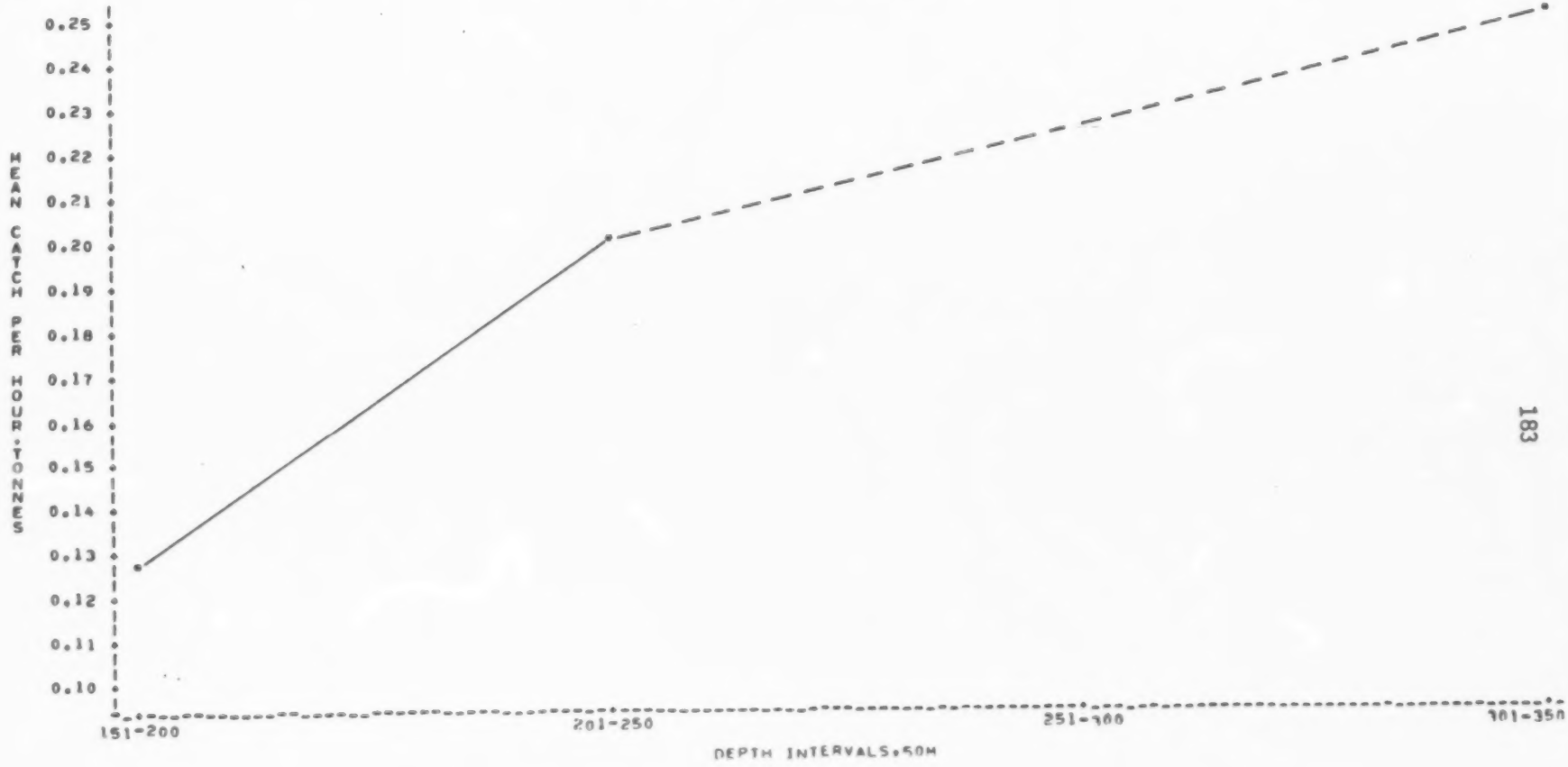


Fig. 3. CATCH PER HOUR AT DEPTH,1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JUNE NAFO=3K

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

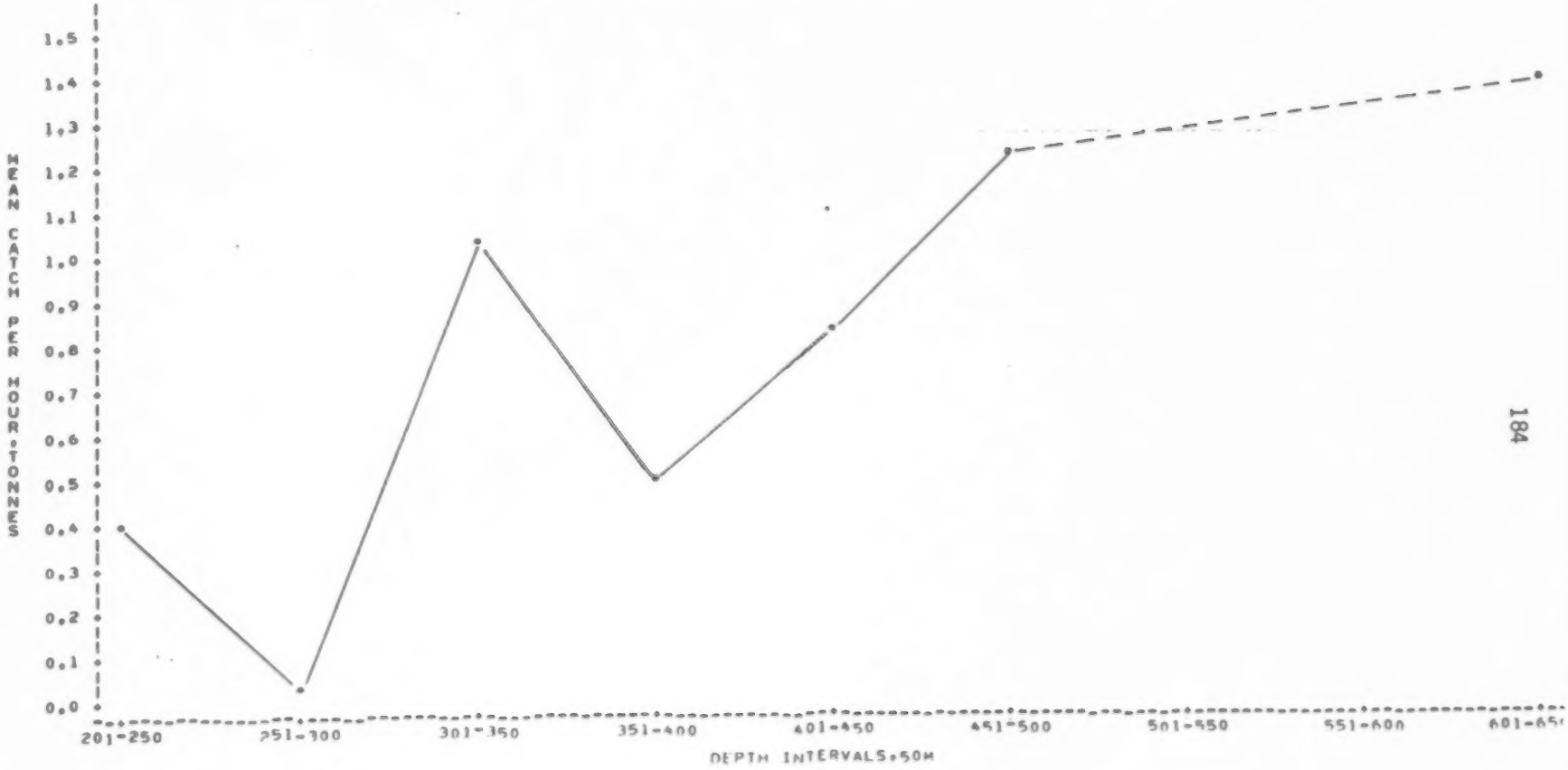


Fig. 3. CATCH PER HOUR AT DEPTH,1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=2H

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

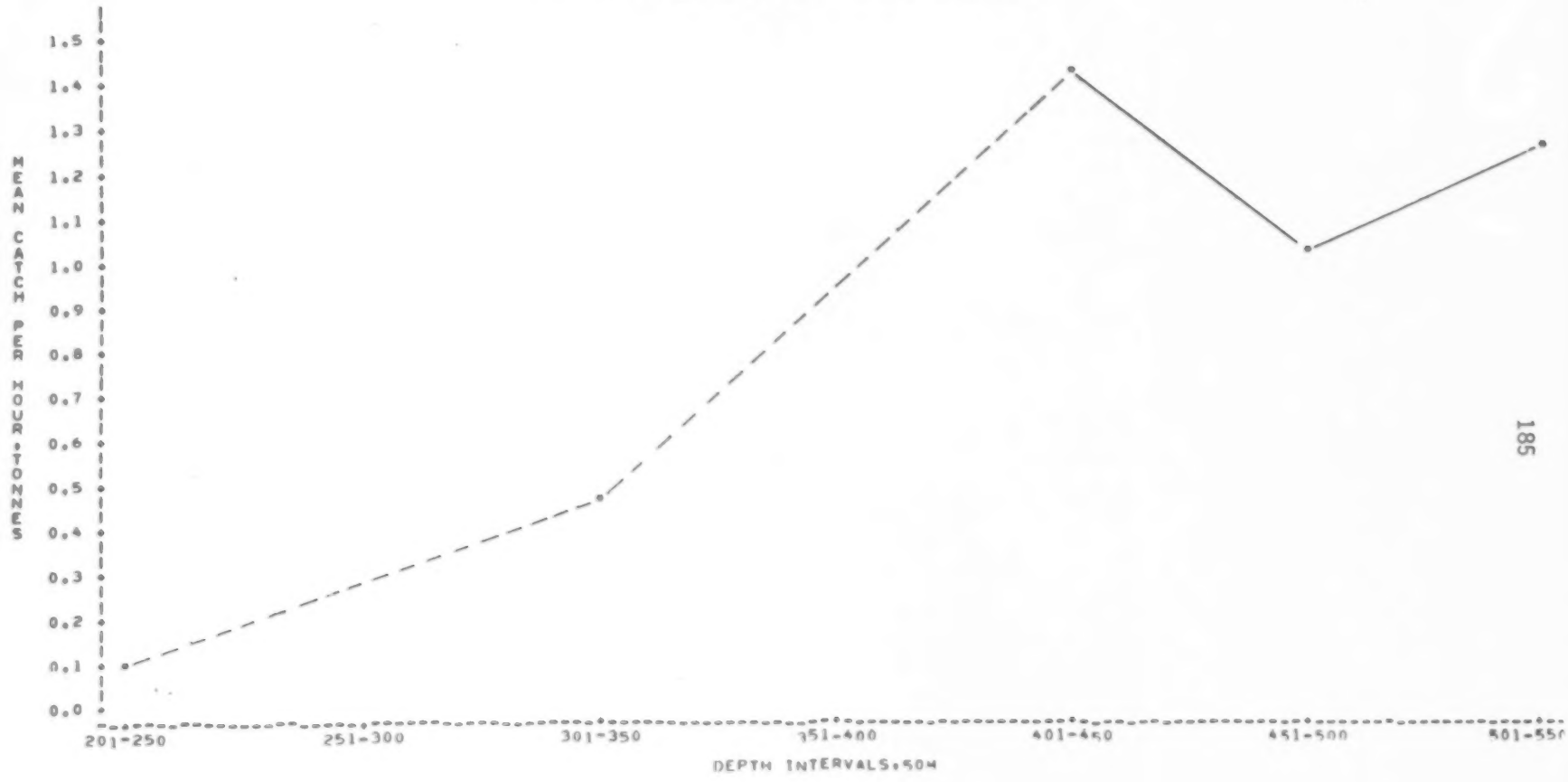


Fig. 3. CATCH PER HOUR AT DEPTH,1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=2J

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

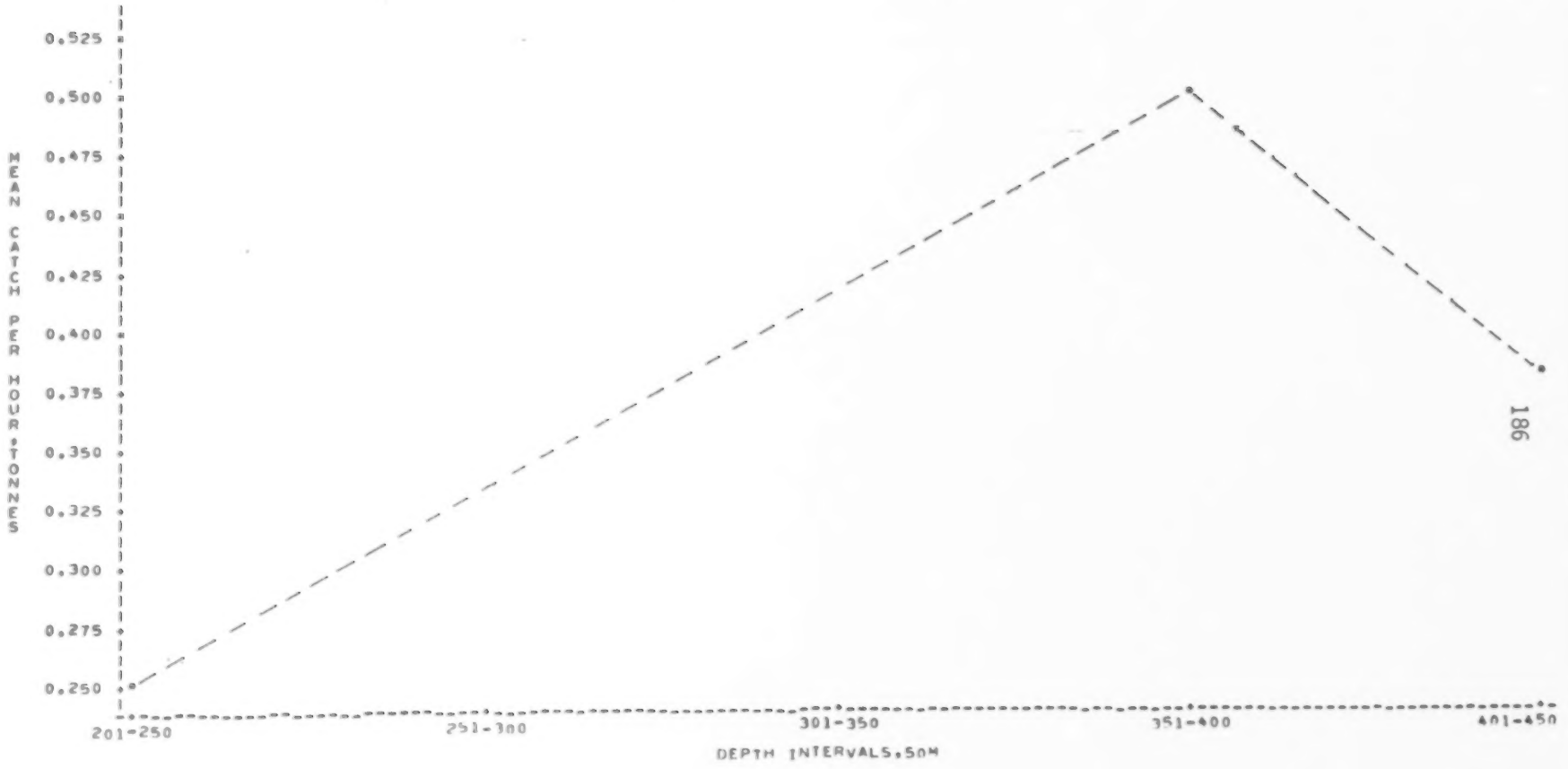


Fig. 3. CATCH PER HOUR AT DEPTH,1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=3K

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

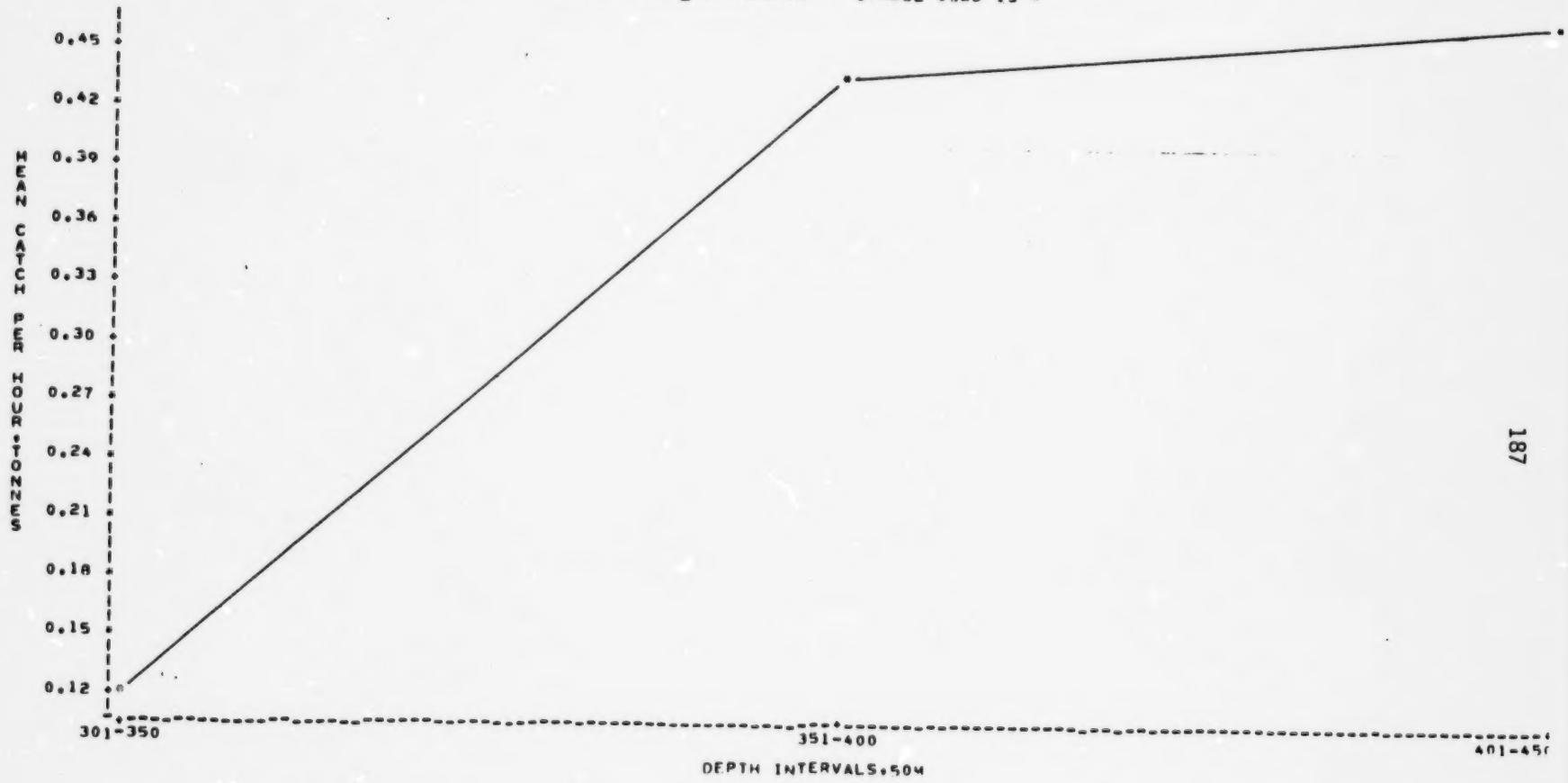


Fig. 3. CATCH PER HOUR AT DEPTH,1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2H

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2J
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

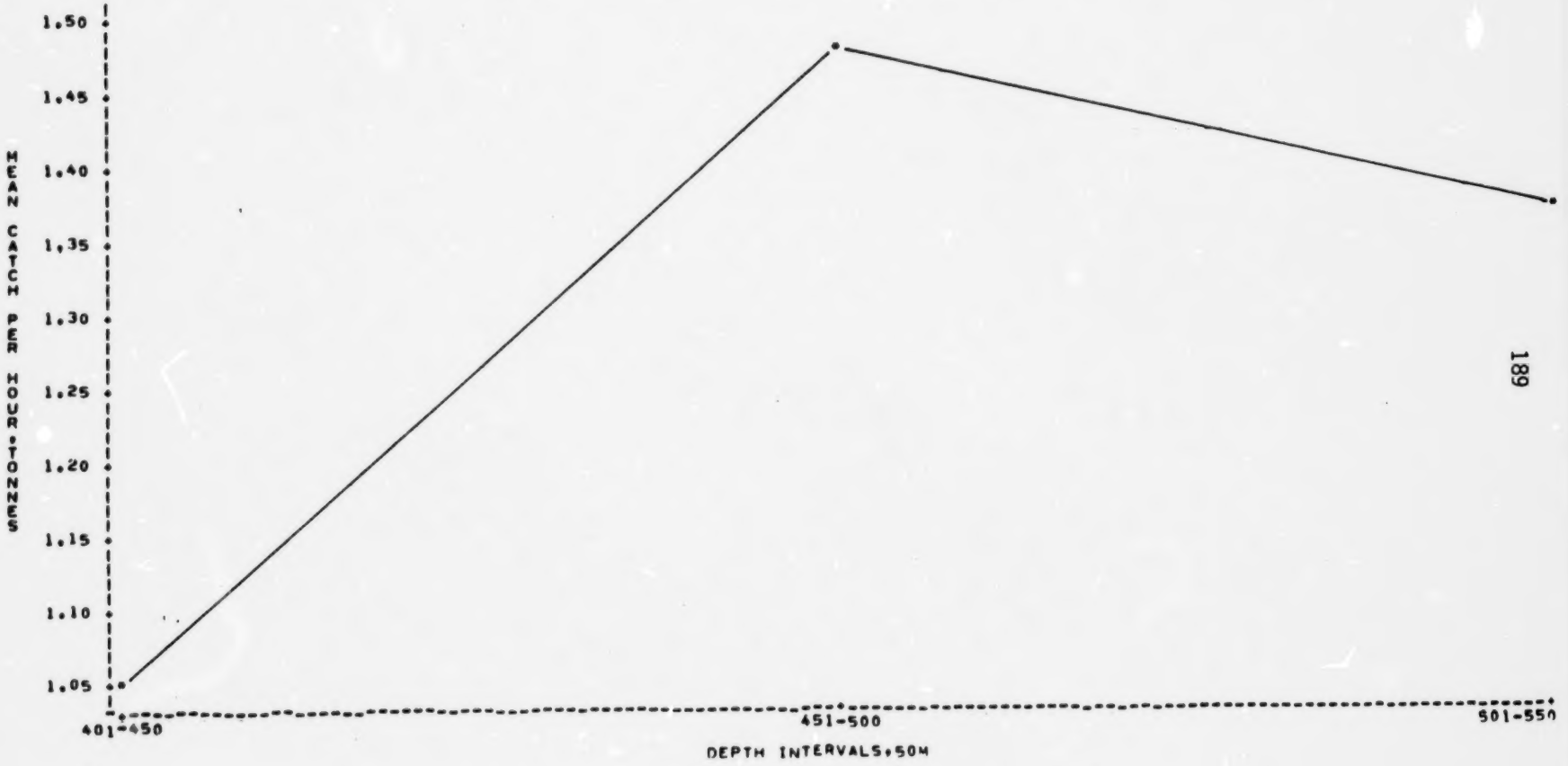


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2H
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

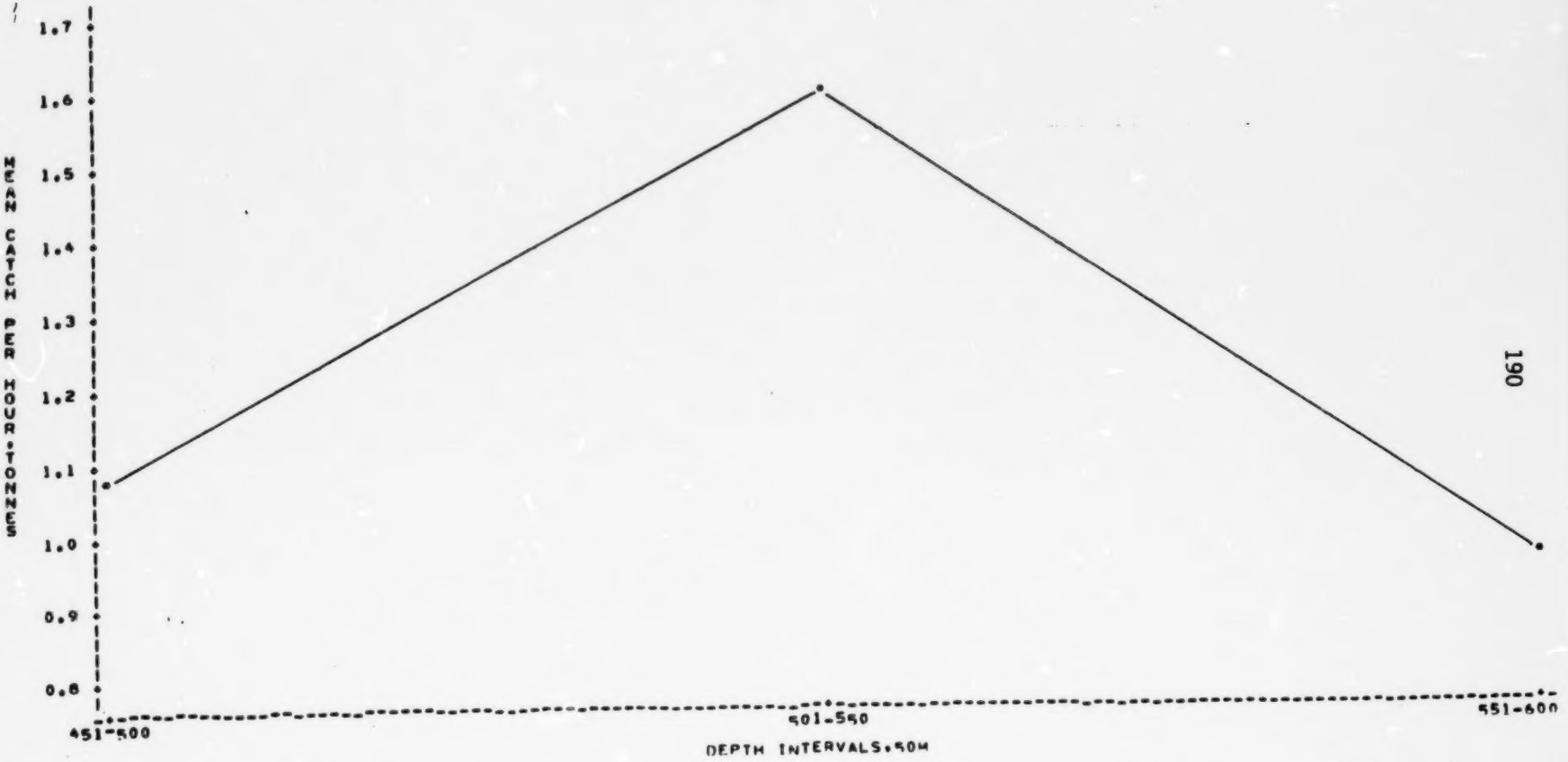


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=GDR MONTH=AUG NAFO=3K
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

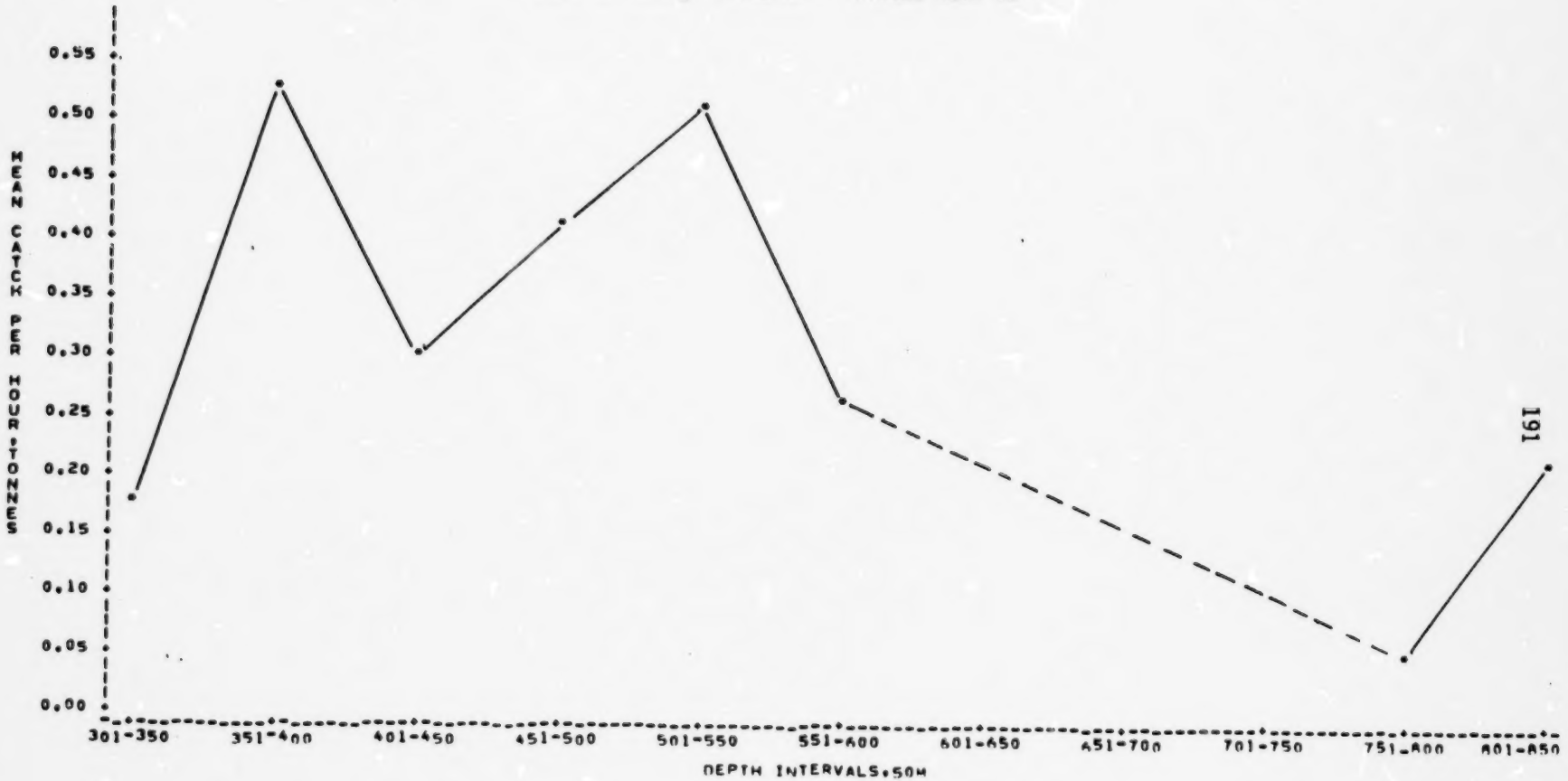


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=POLAND MONTH=JAN NAFO=2J
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

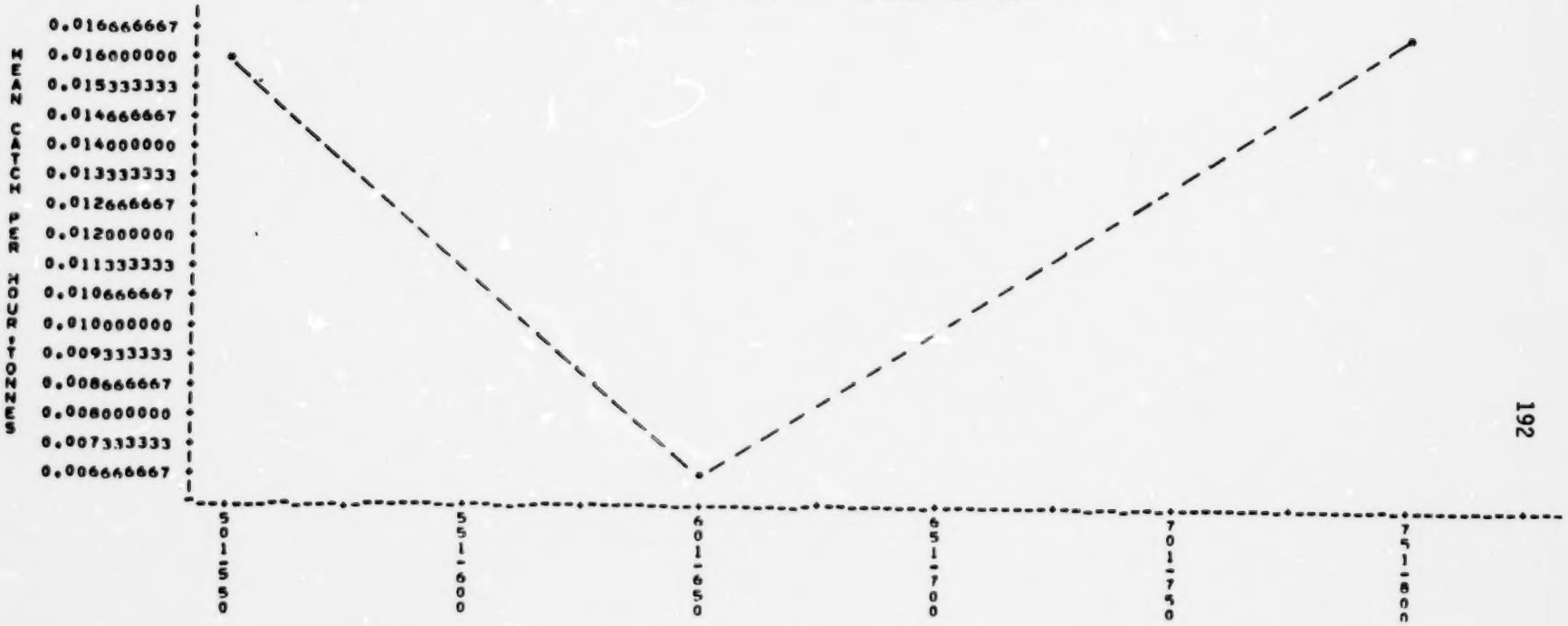


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=POLAND MONTH=JAN NAFO=3K
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

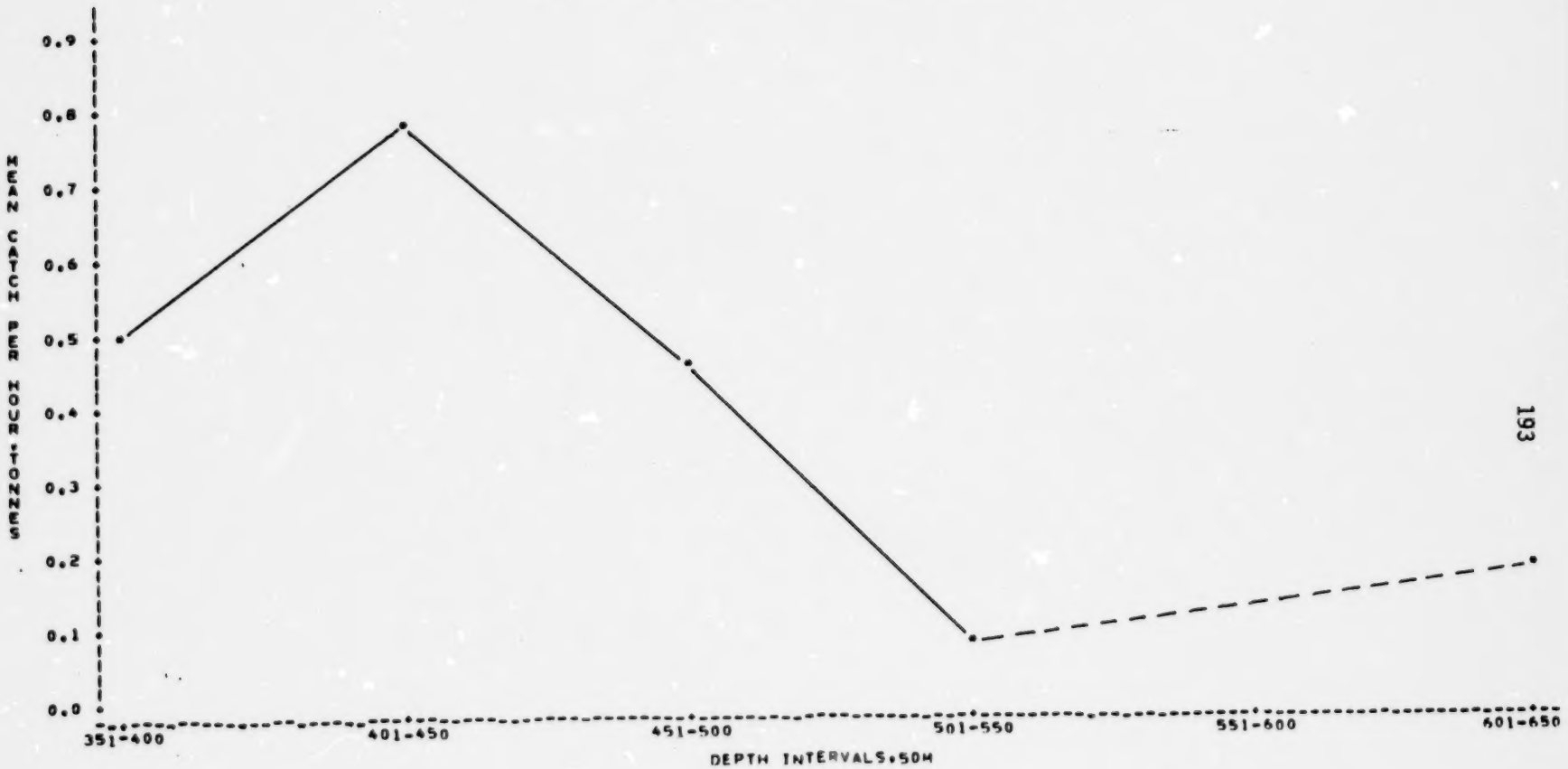


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=2J
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

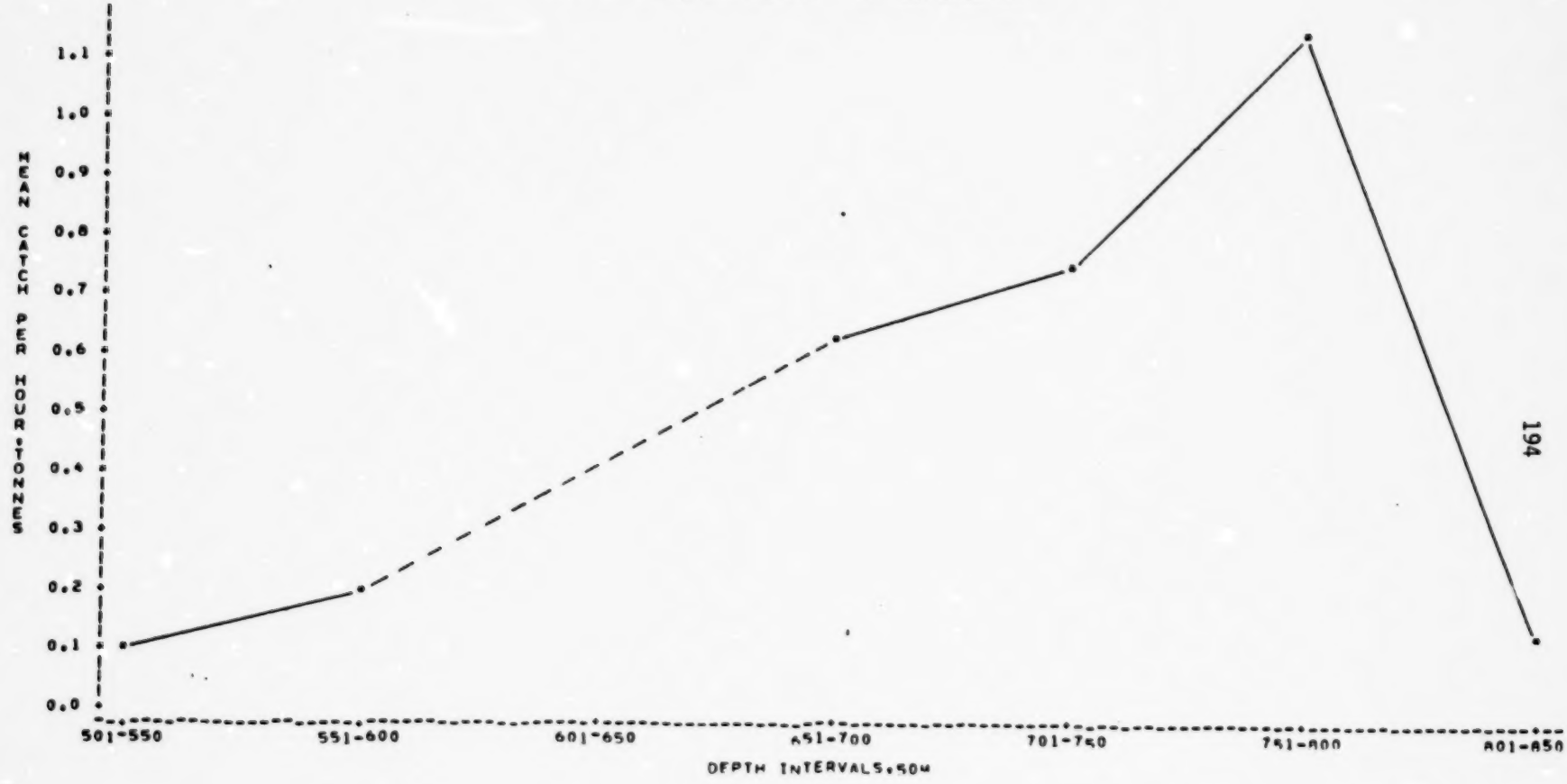


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=POLAND MONTH=FEB NAFO=3K
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

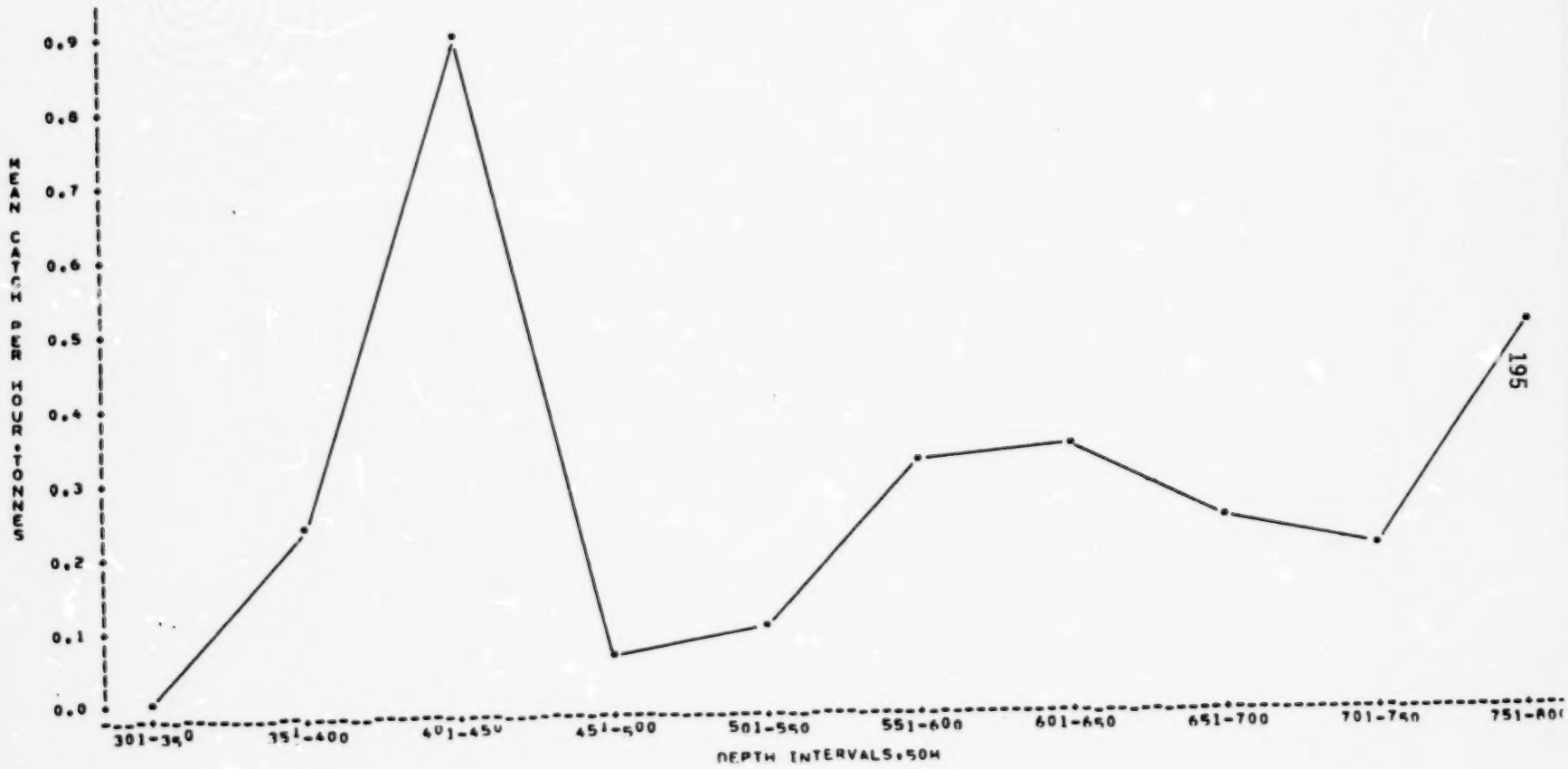


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=POLAND MONTH=MAY NAFO=3K
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

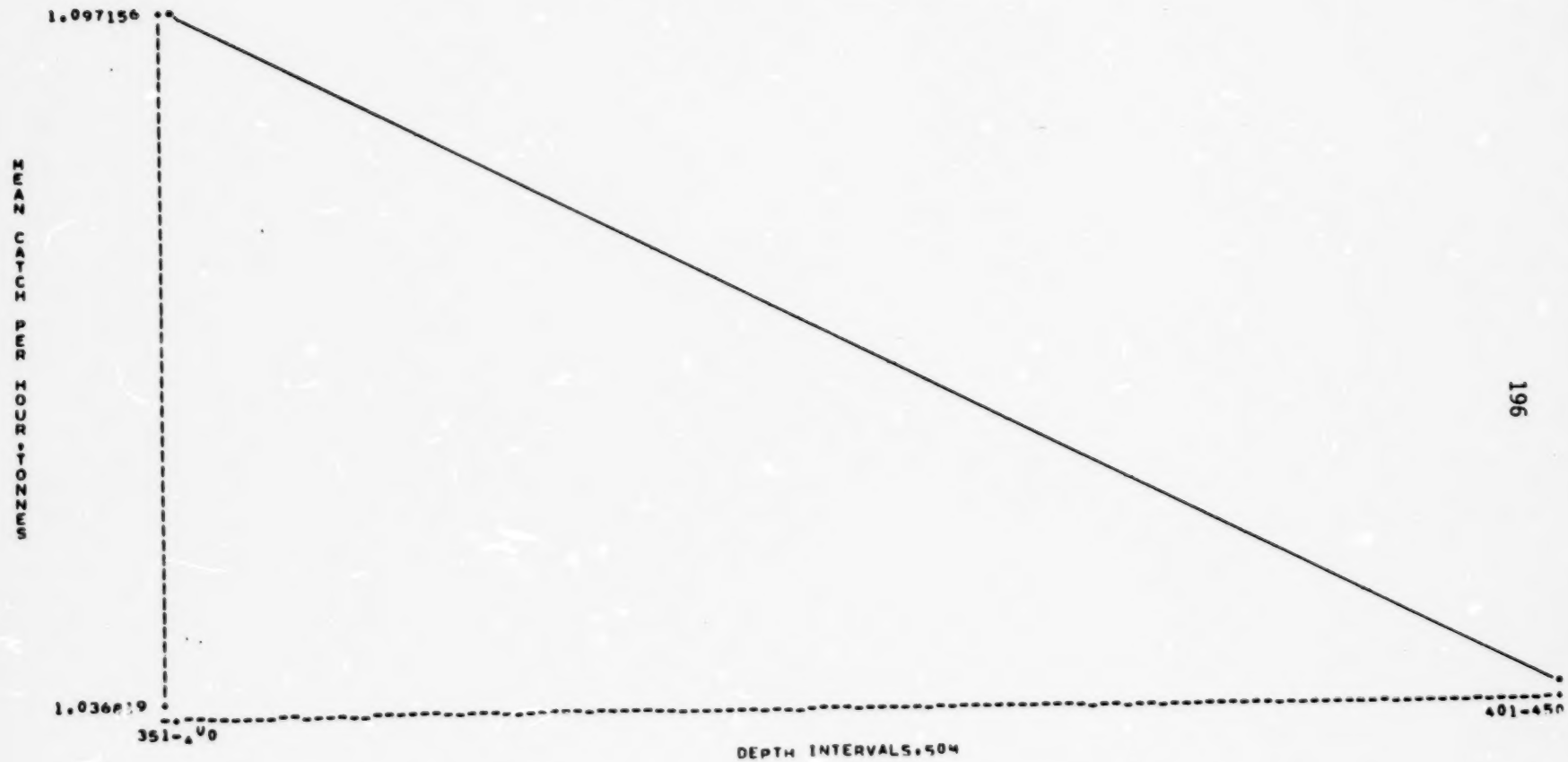


Fig. 3. CATCH PER HOUR AT DEPTH,1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JUNE NAFO=3K

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

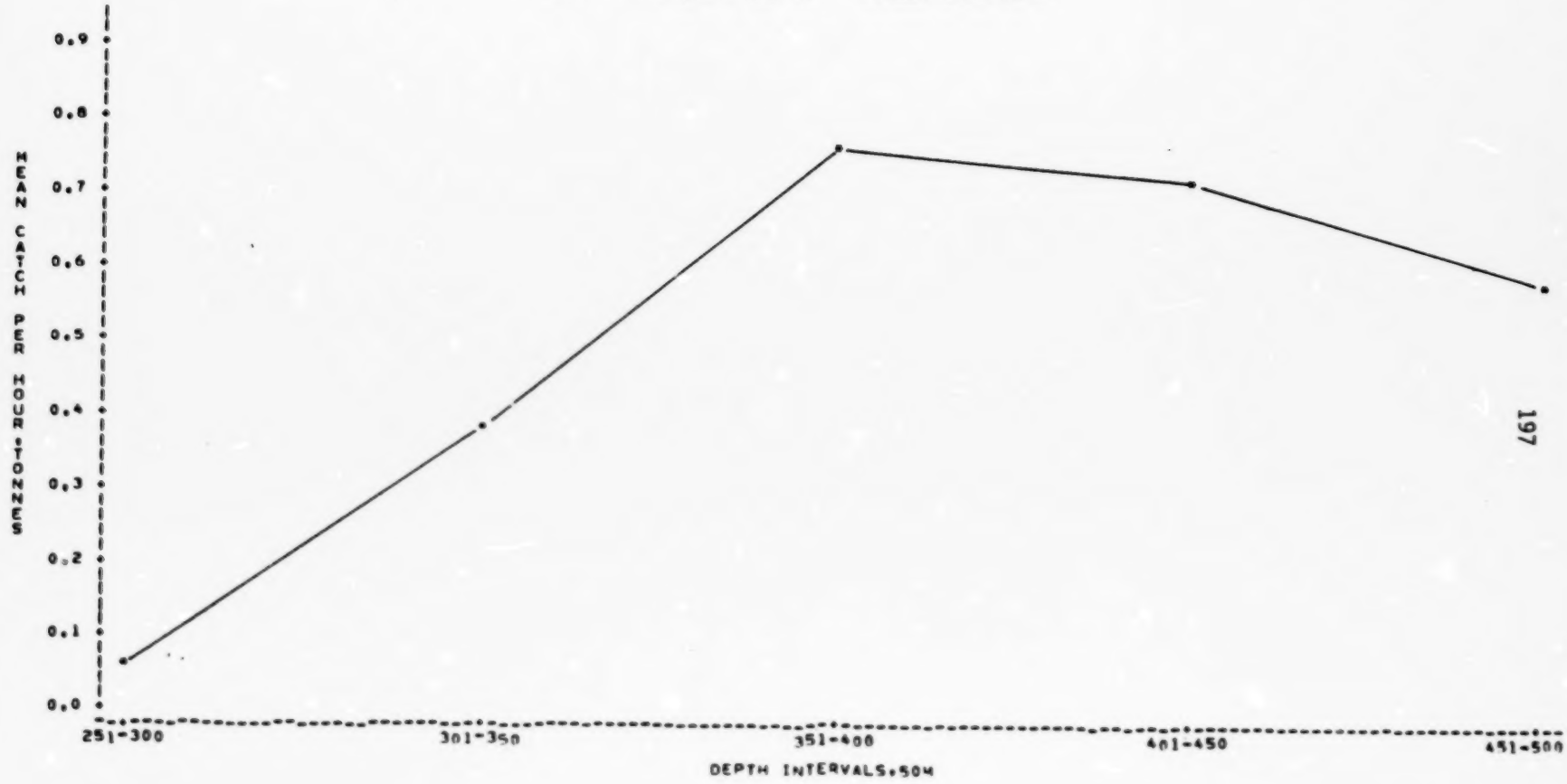


Fig. 3. CATCH PER HOUR AT DEPTH,1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JULY NAFO=2H

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

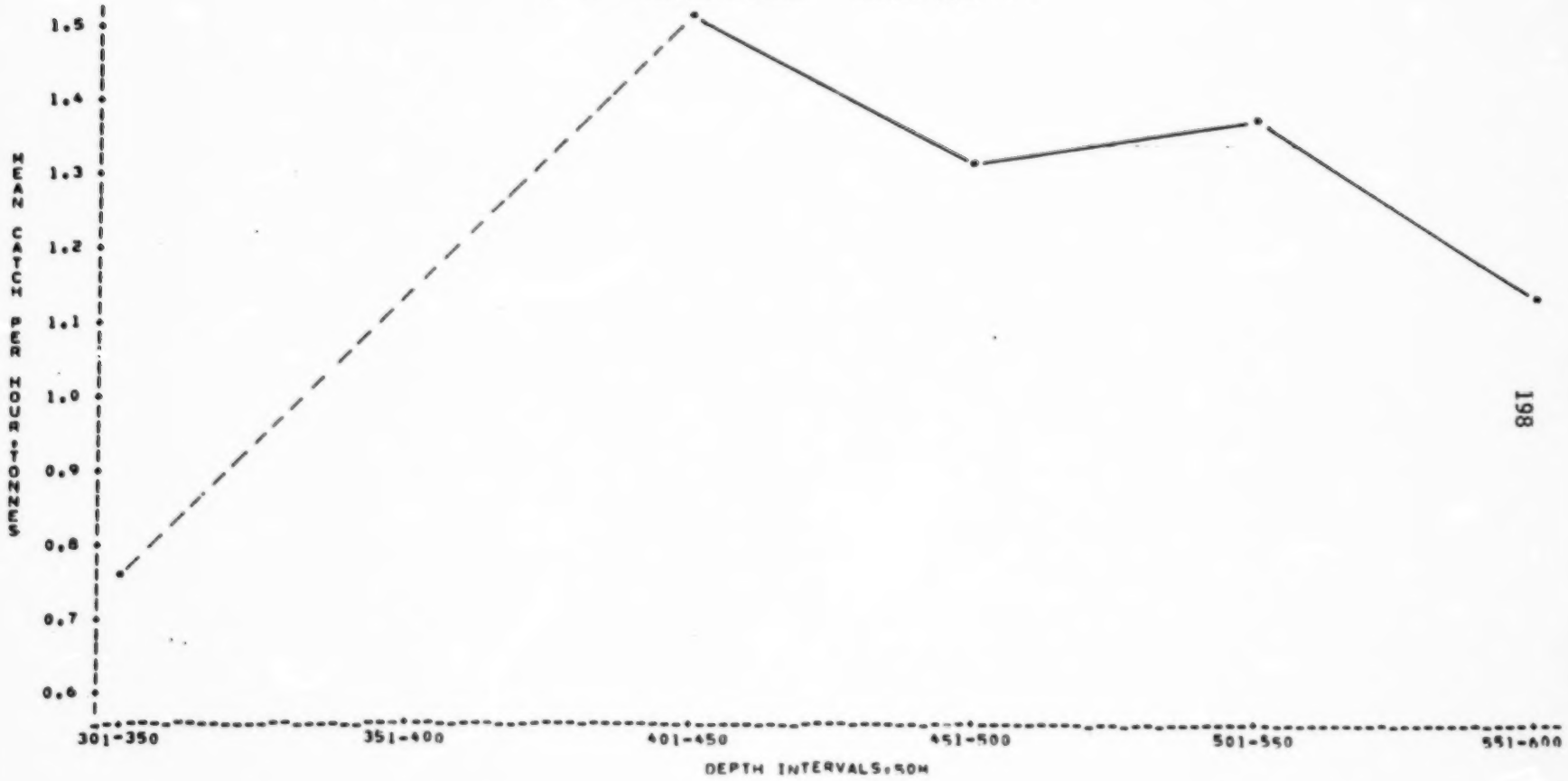


Fig. 3. CATCH PER HOUR AT DEPTH,1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=JULY NAFO=3K

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=POLAND MONTH=AUG NAFO=2H
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

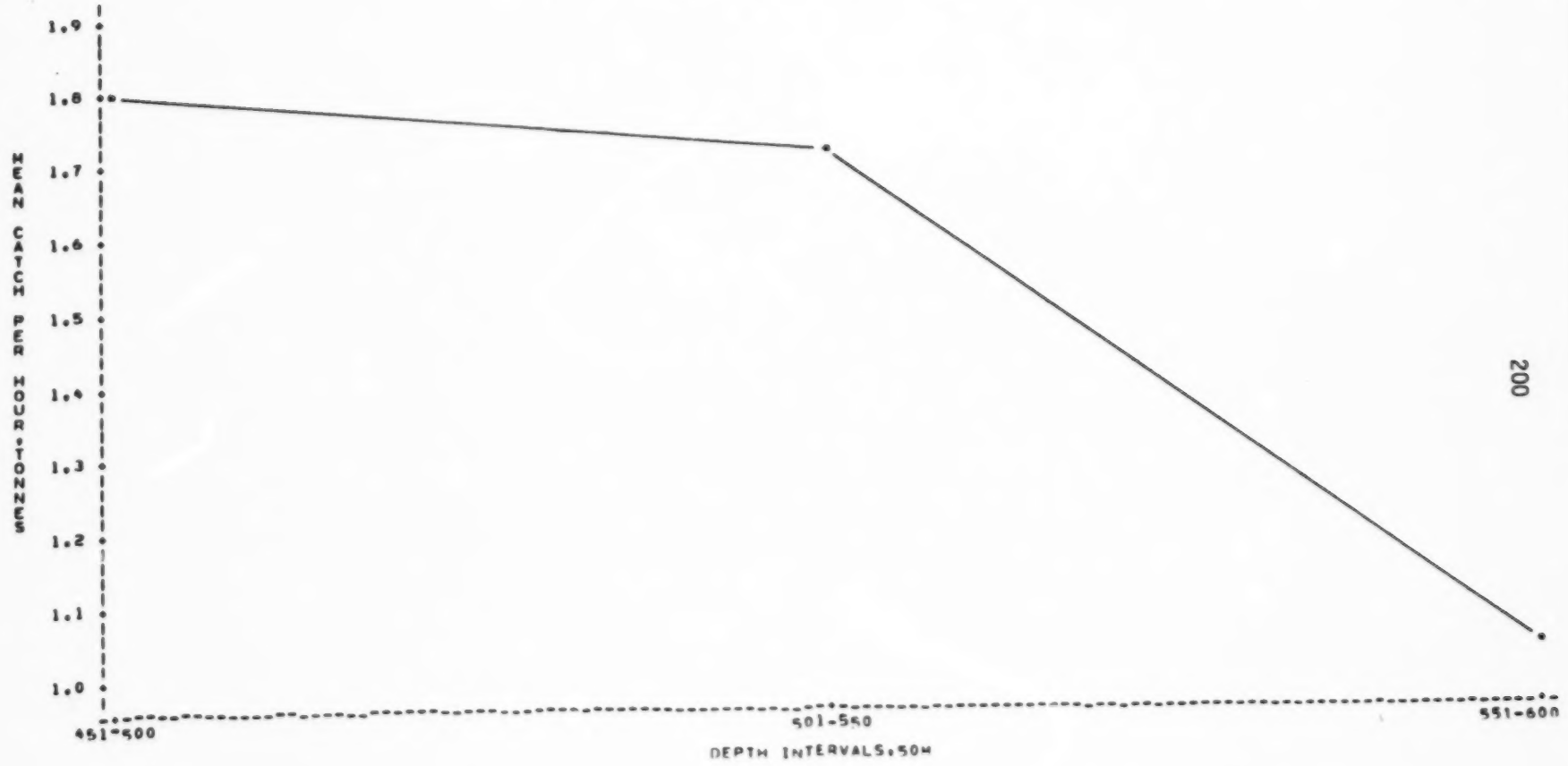


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=POLAND MONTH=AUG NAFO=3K
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

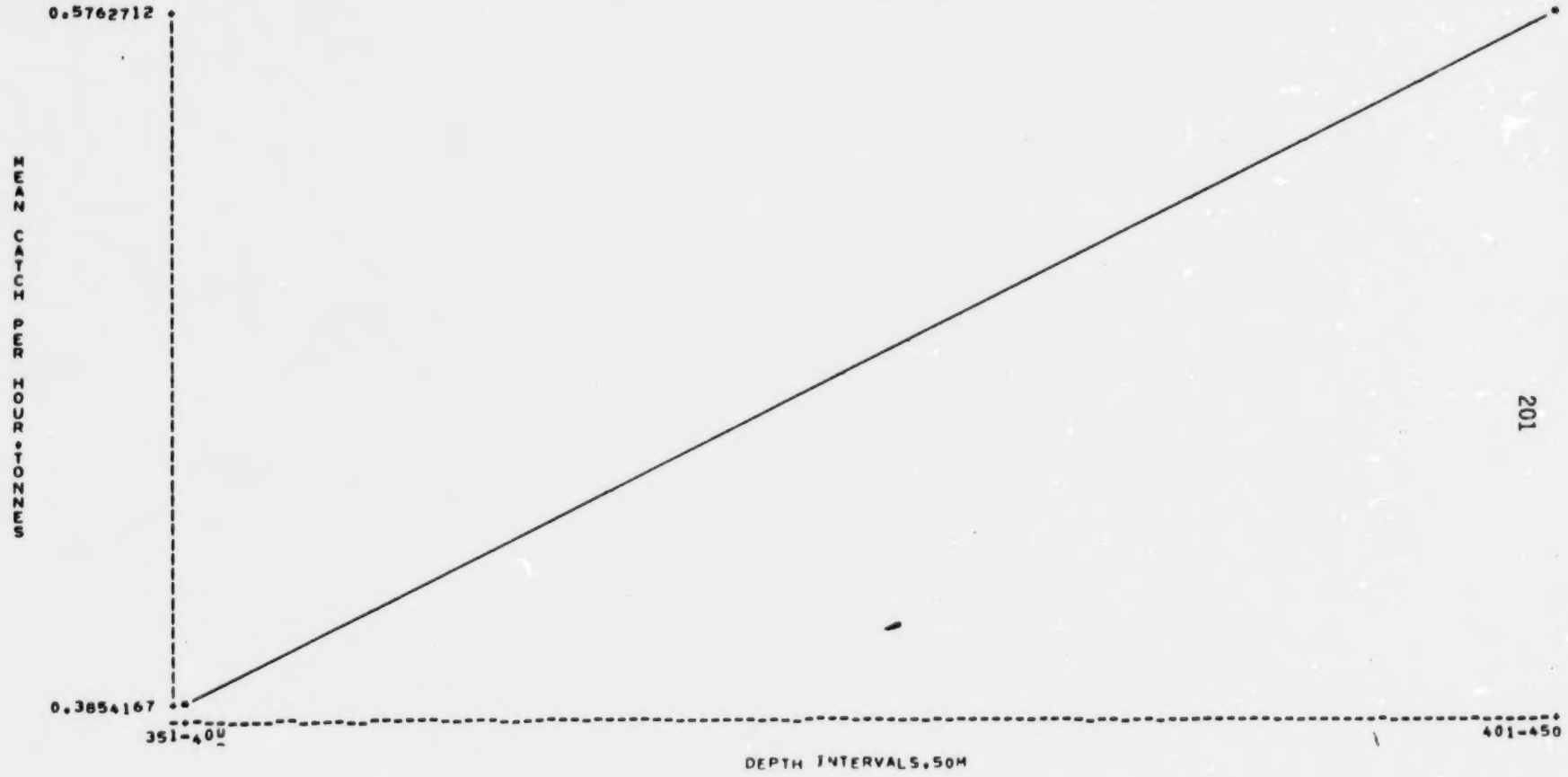


Fig. 3. CATCH PER HOUR AT DEPTH,1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=SEPT NAFO=3K

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

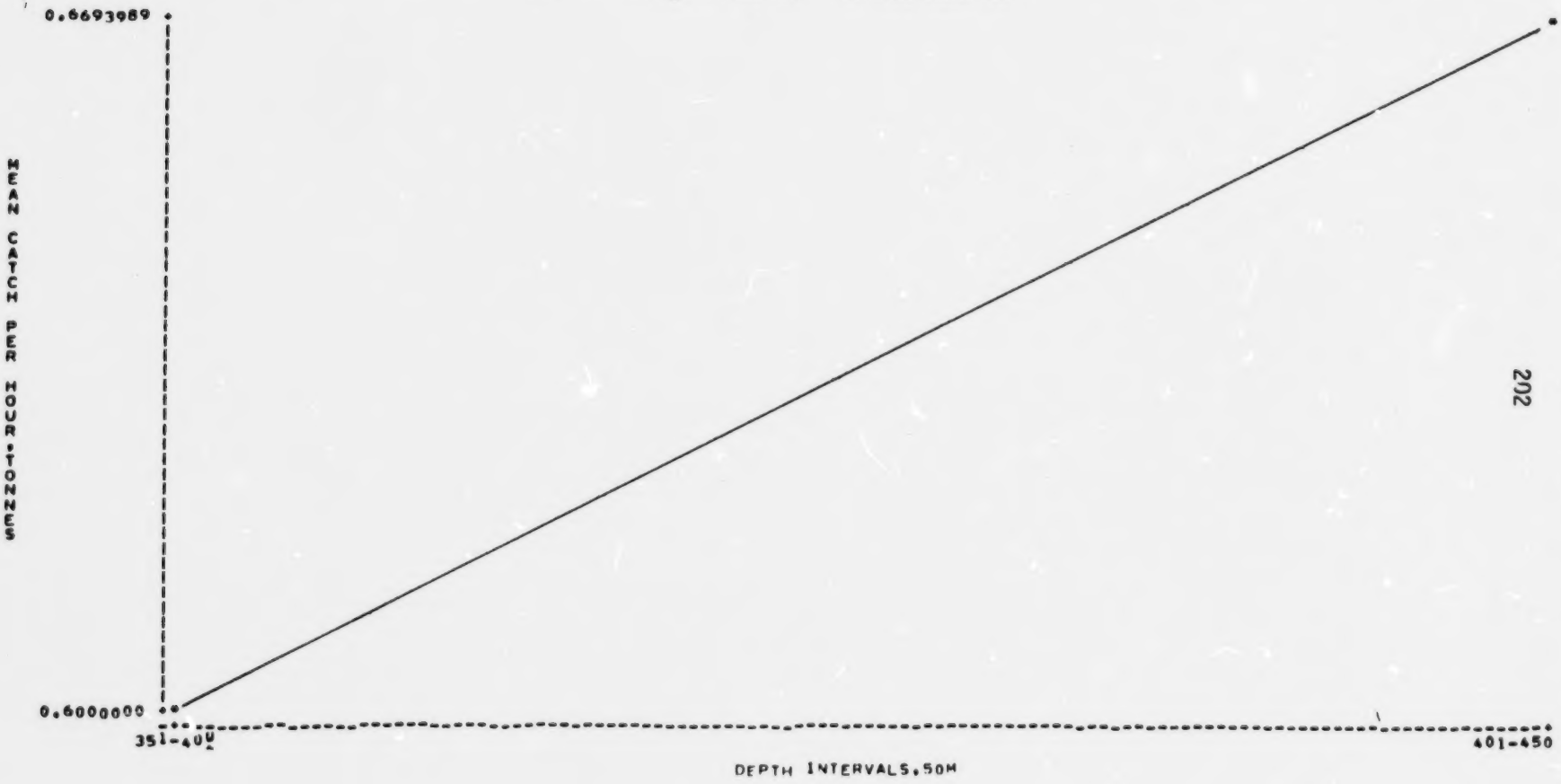


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=2J
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

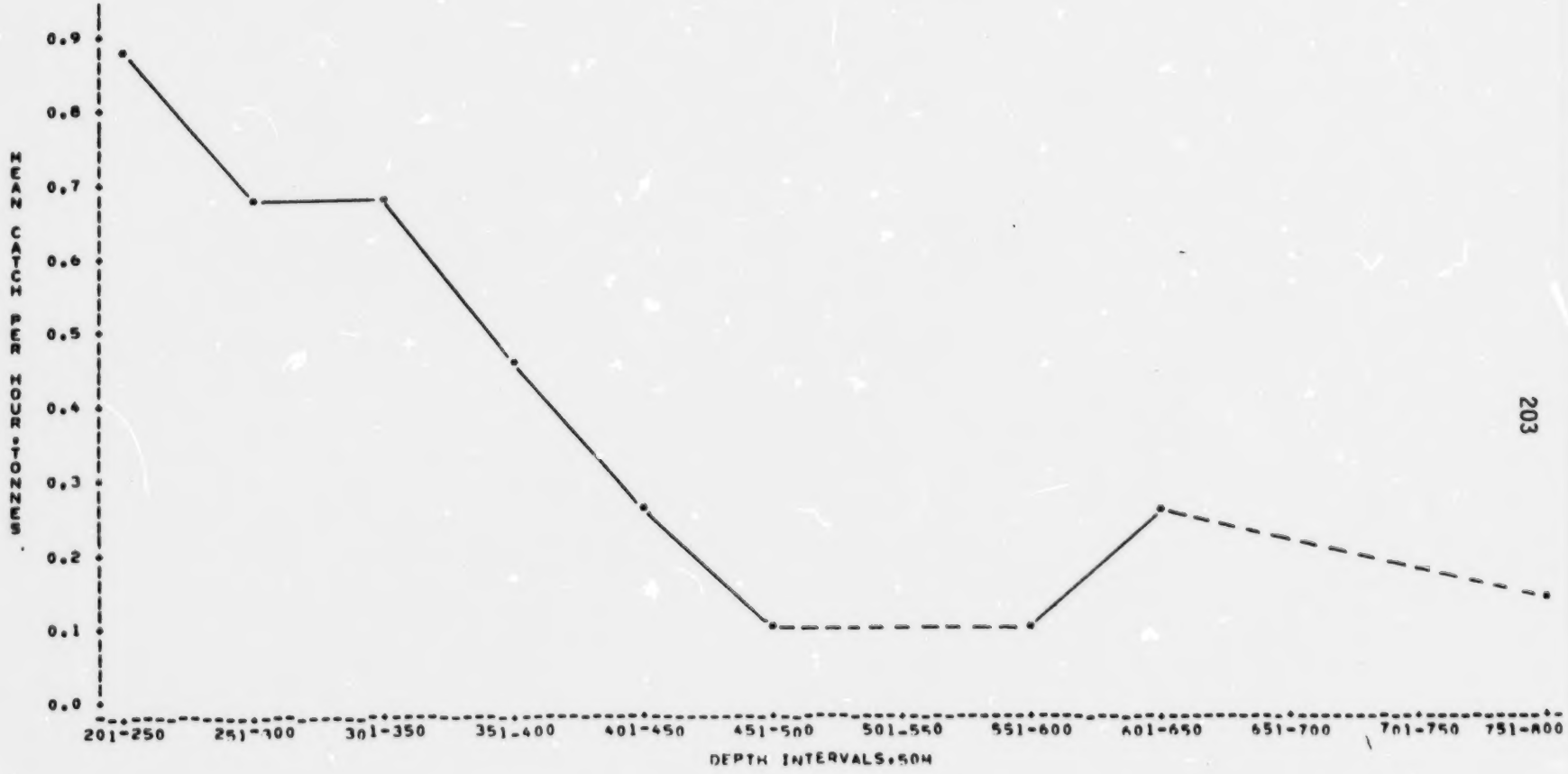


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=POLAND MONTH=OCT NAFO=3K
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

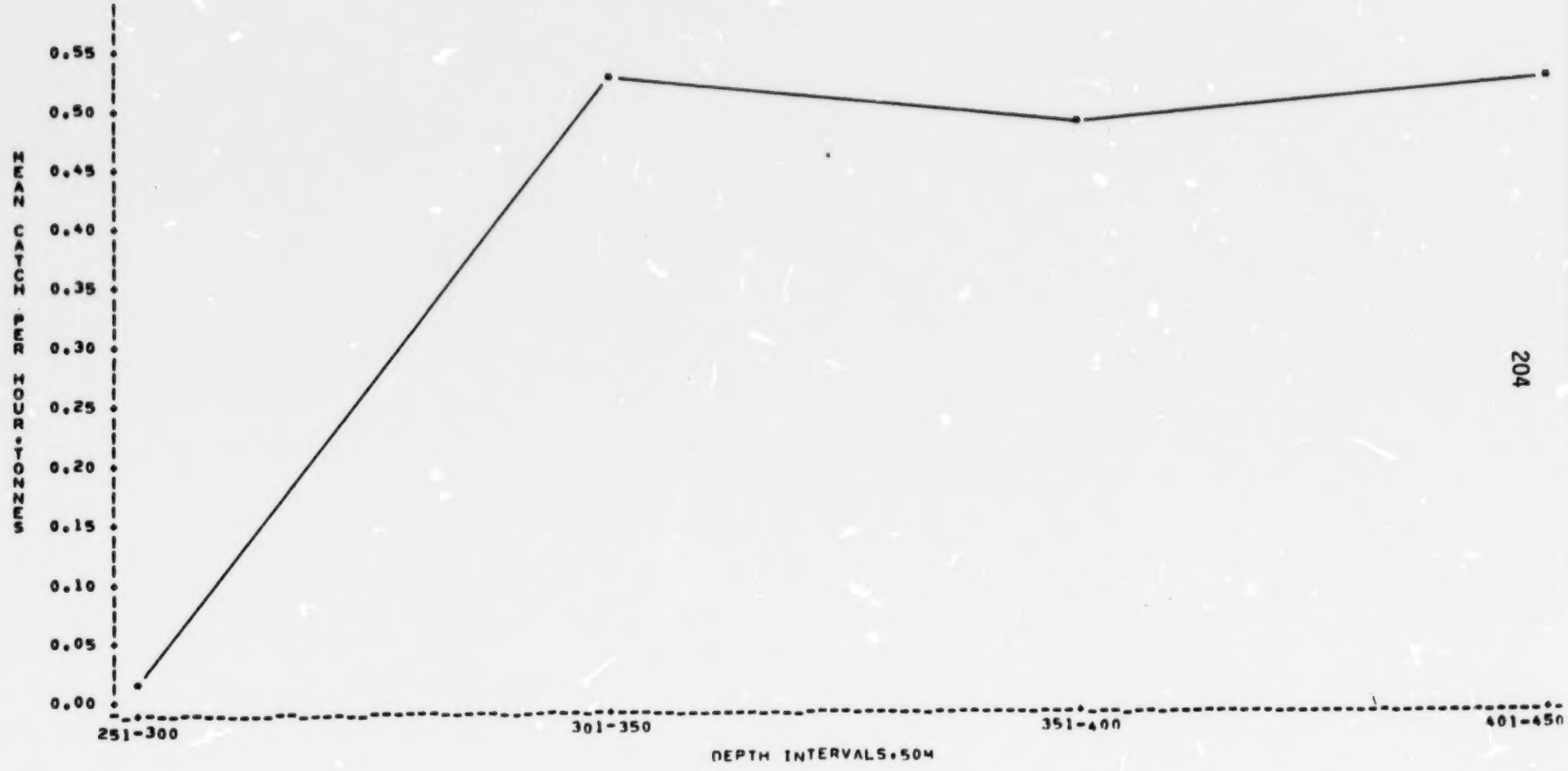


Fig. 3. CATCH PER HOUR AT DEPTH,1983

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2J

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

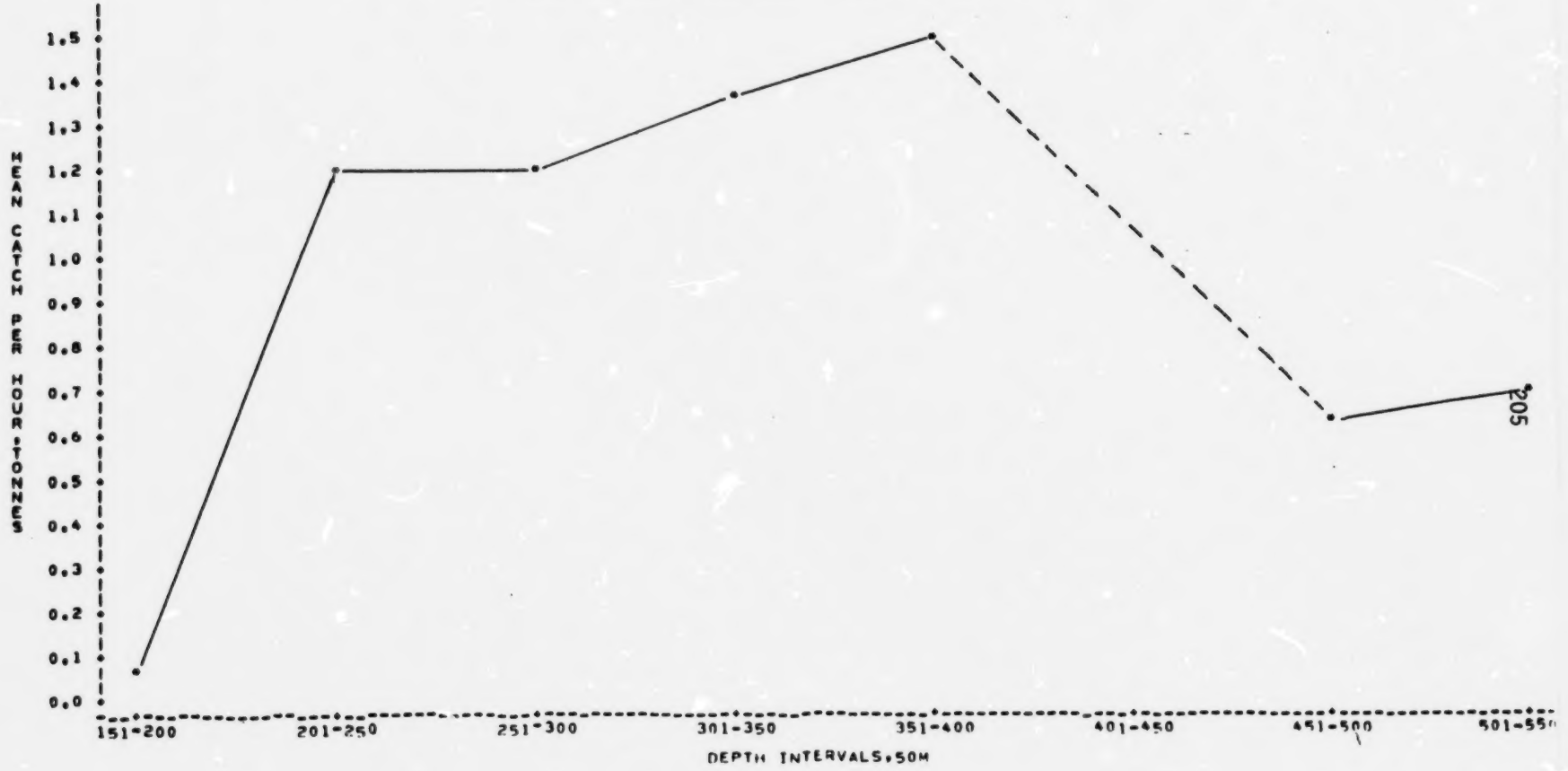


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=POLAND MONTH=DEC NAFO=2H
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

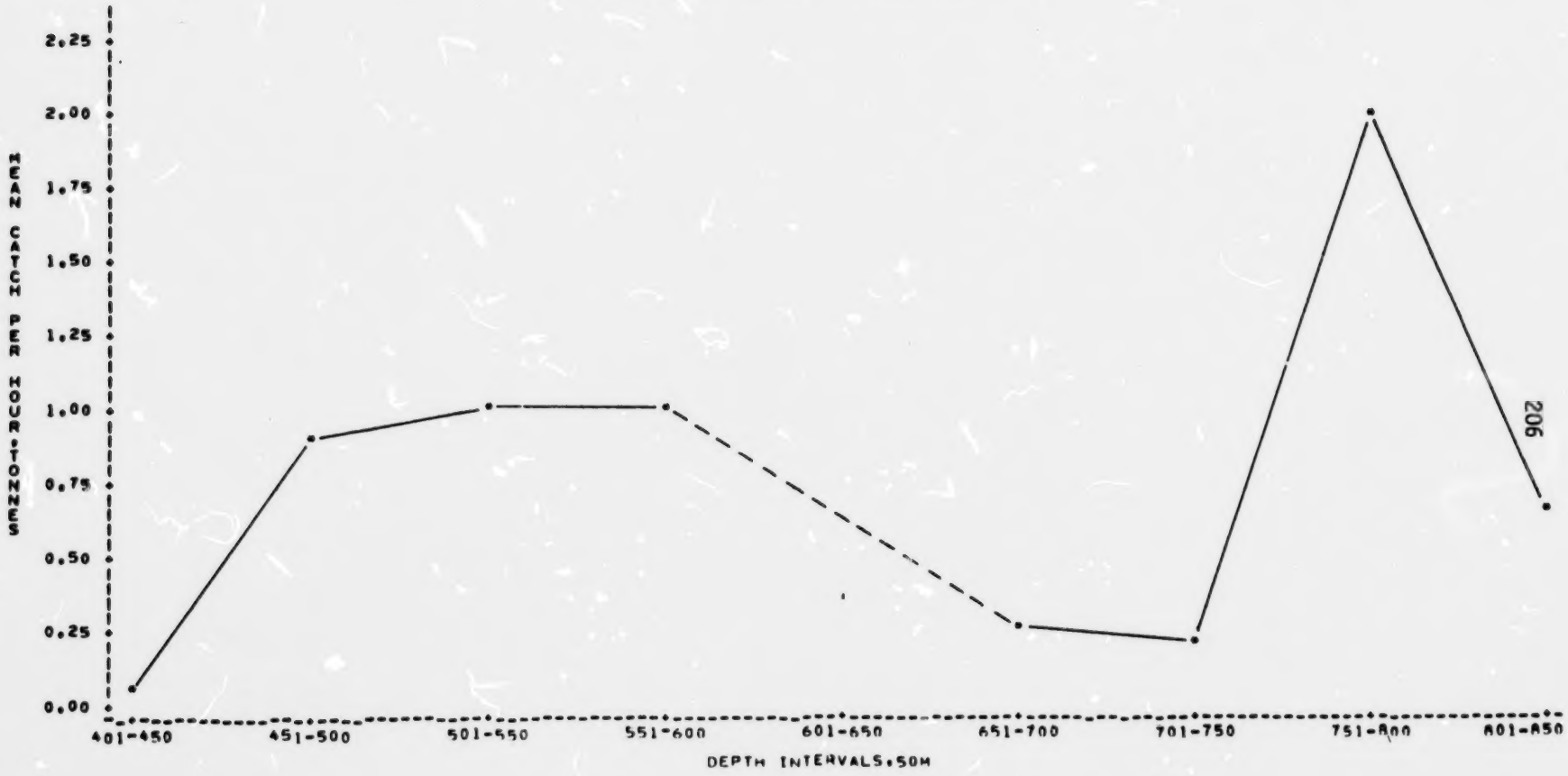


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=USSR MONTH=AUG NAFO=0
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

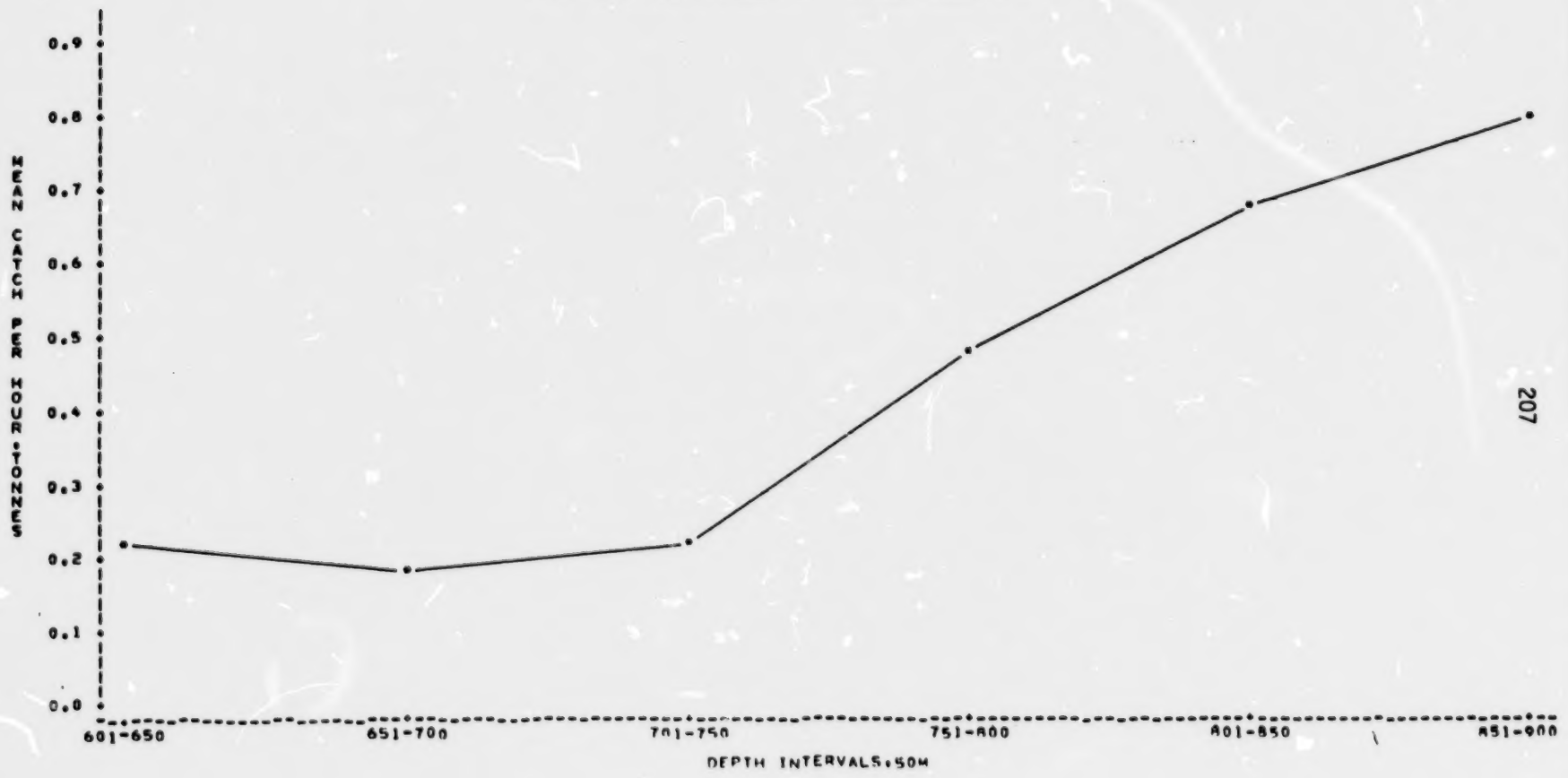


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=USSR MONTH=SEPT NAFO=0
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

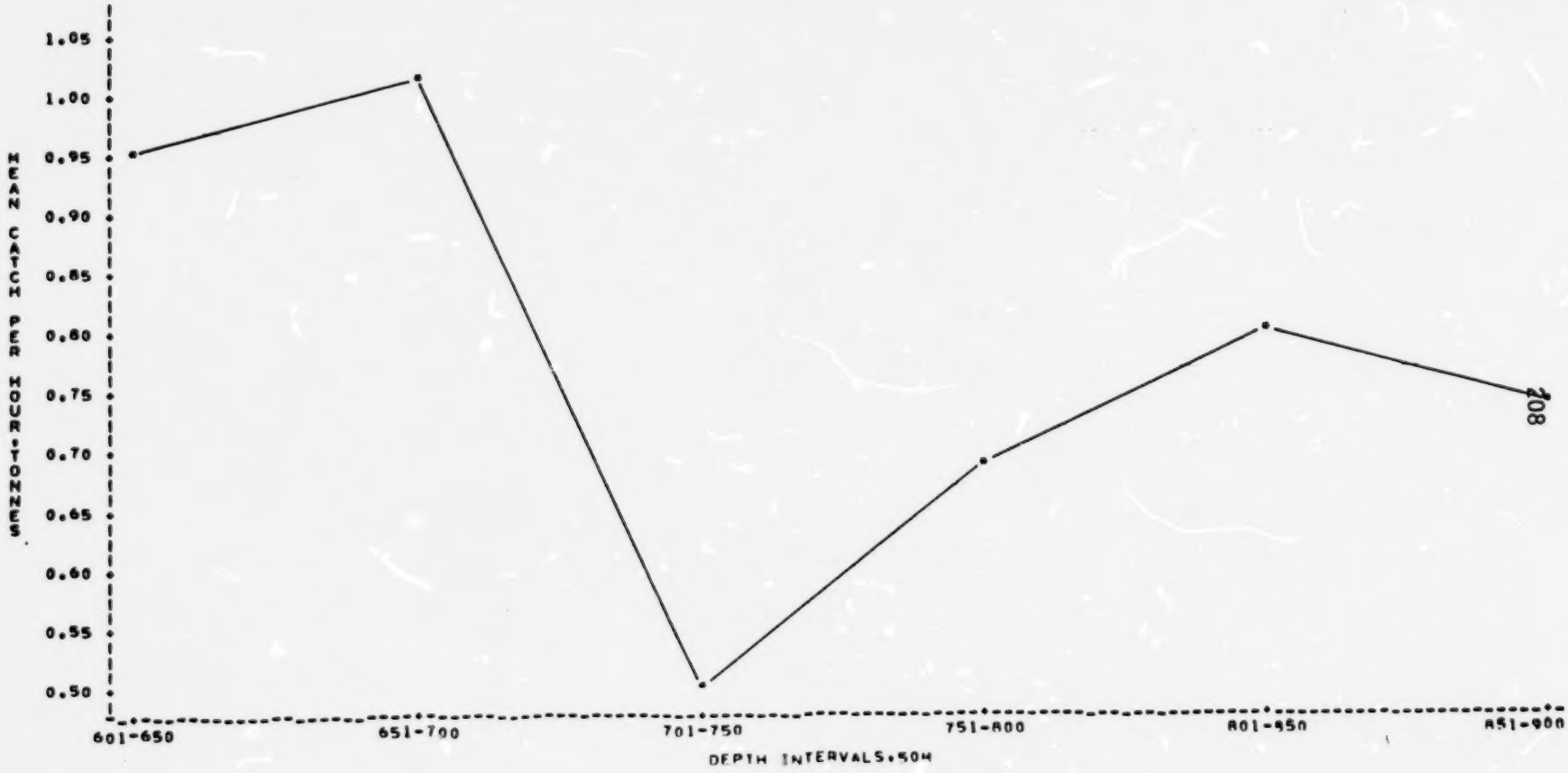


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=USSR MONTH=OCT NAFO=0
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

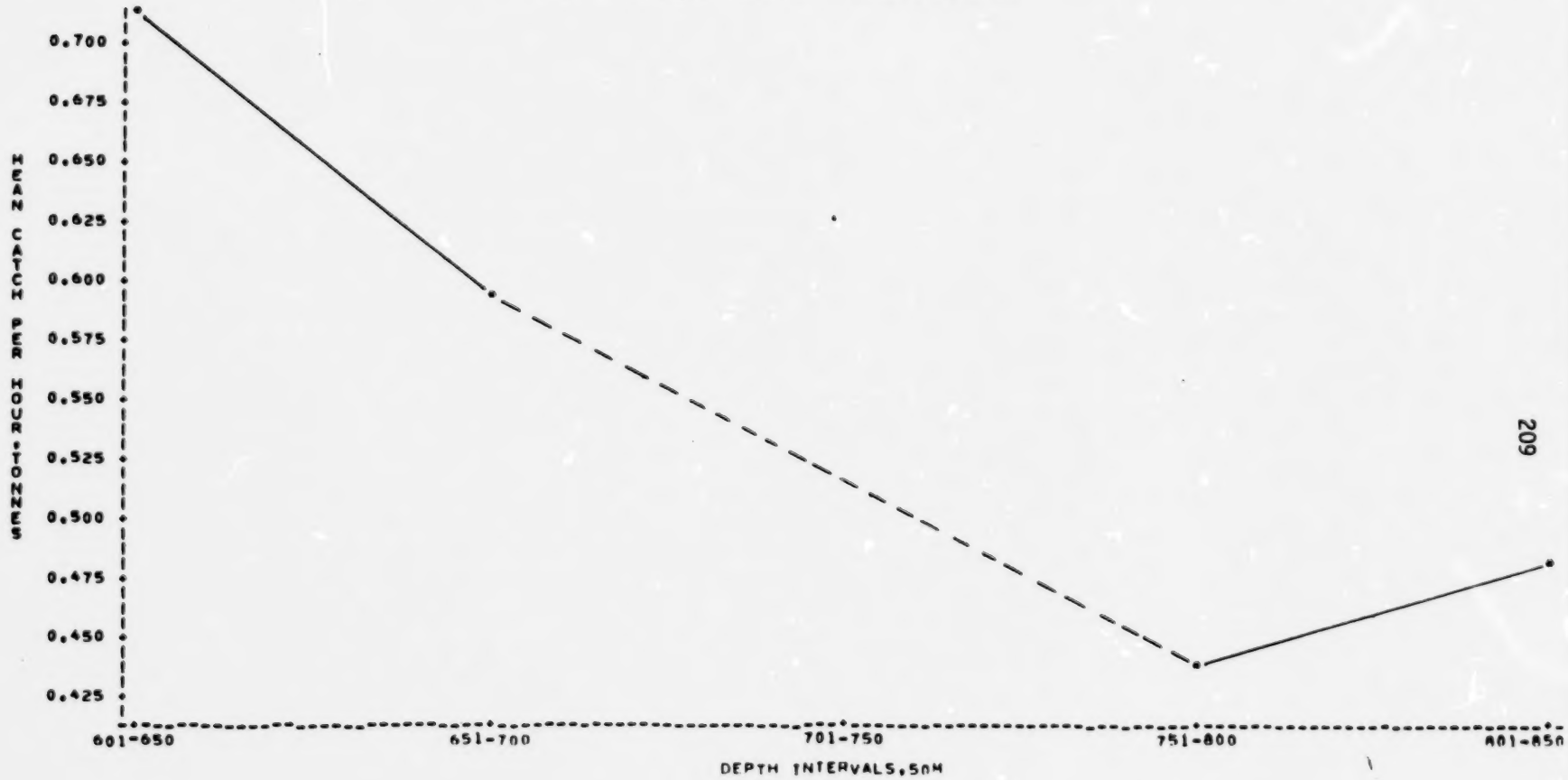


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=USSR MONTH=DEC NAFO=2J
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

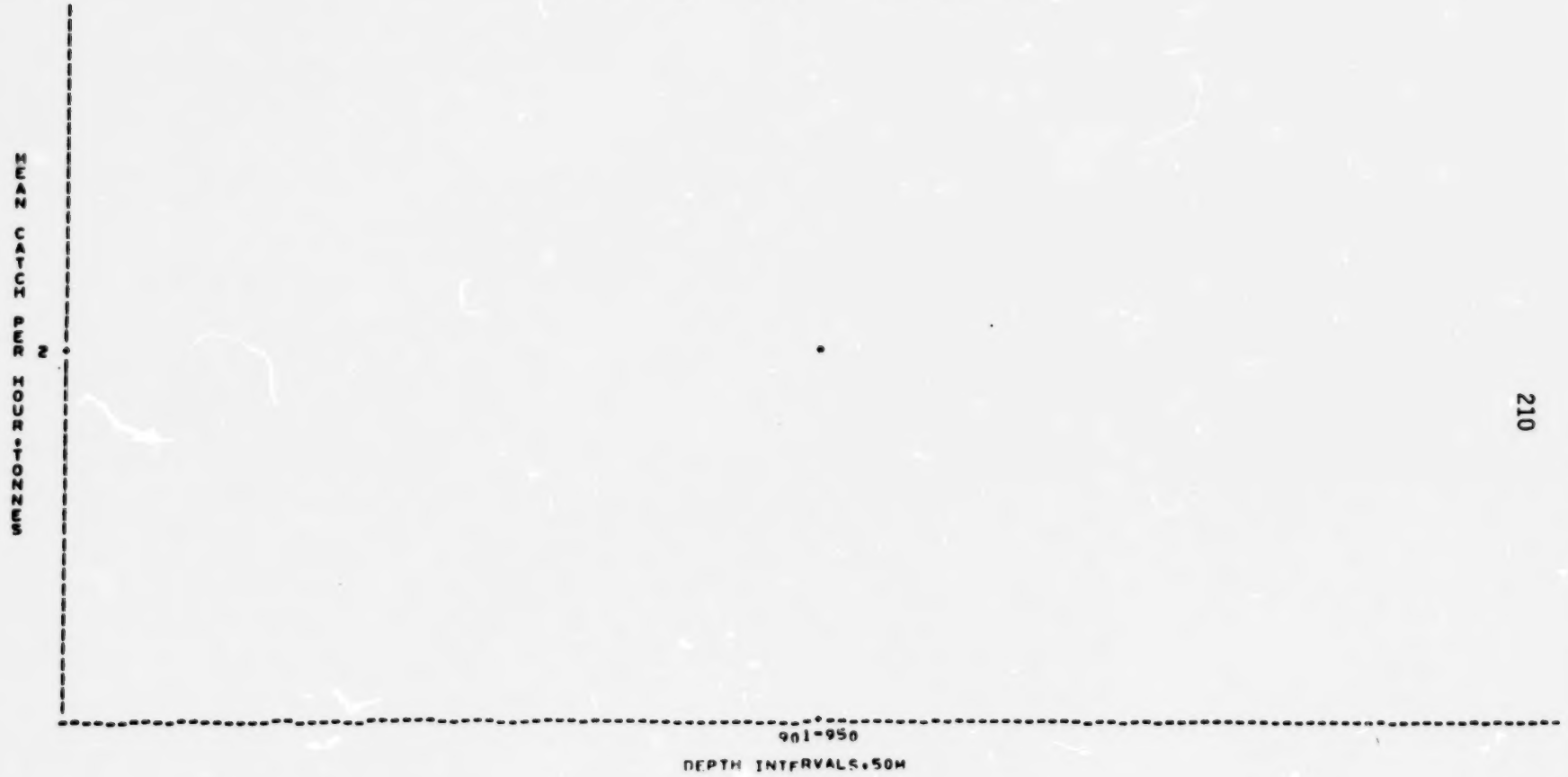


Fig. 3. CATCH PER HOUR AT DEPTH,1983
DIRECT=TURBOT COUNTRY=USSR MONTH=DEC NAFO=2H
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

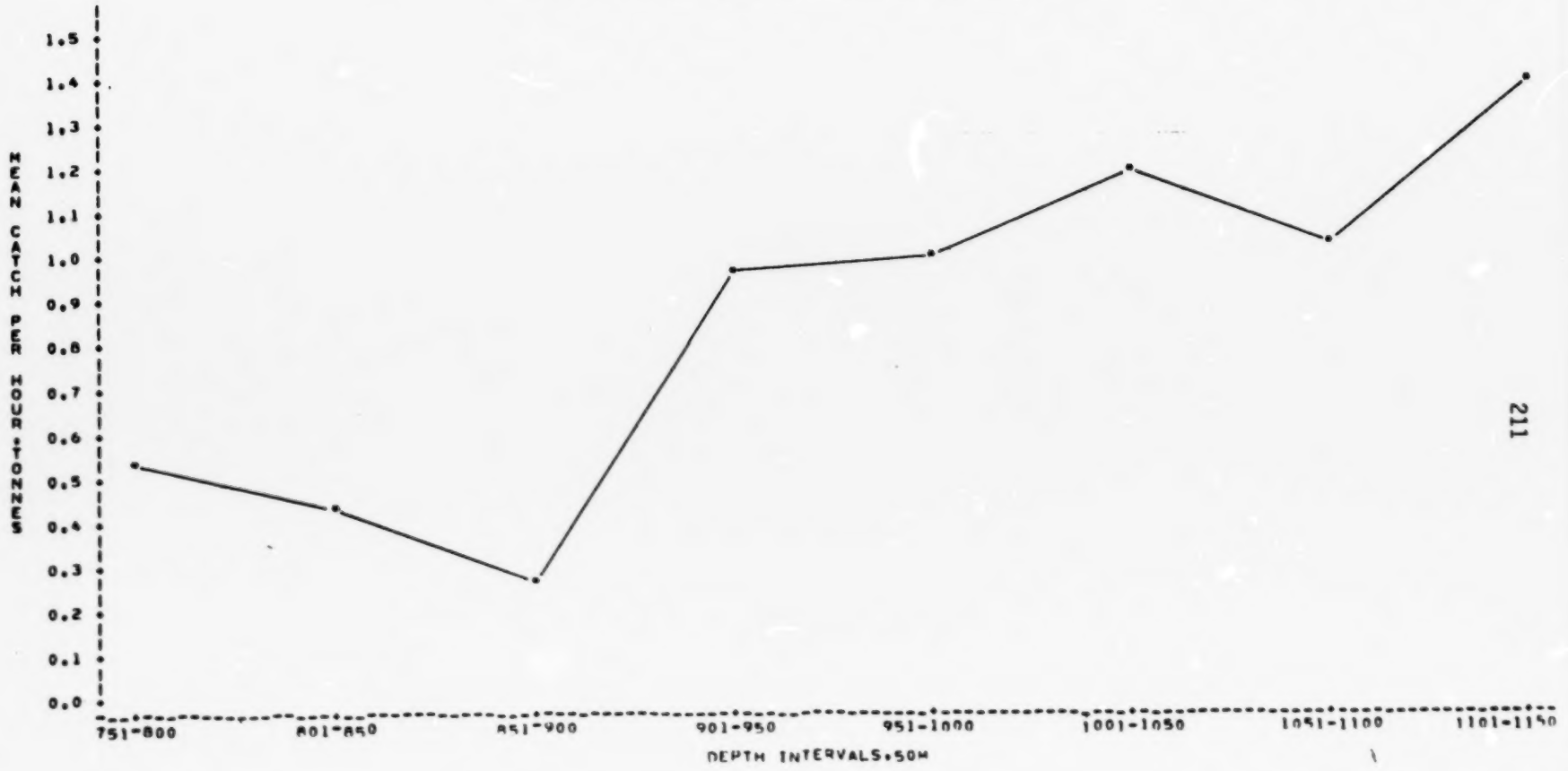


Fig. 3. CATCH PER HOUR AT DEPTH,1983

DIRECT=TURBOT

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

(COMBINED COUNTRIES, AREAS, and MONTHS)

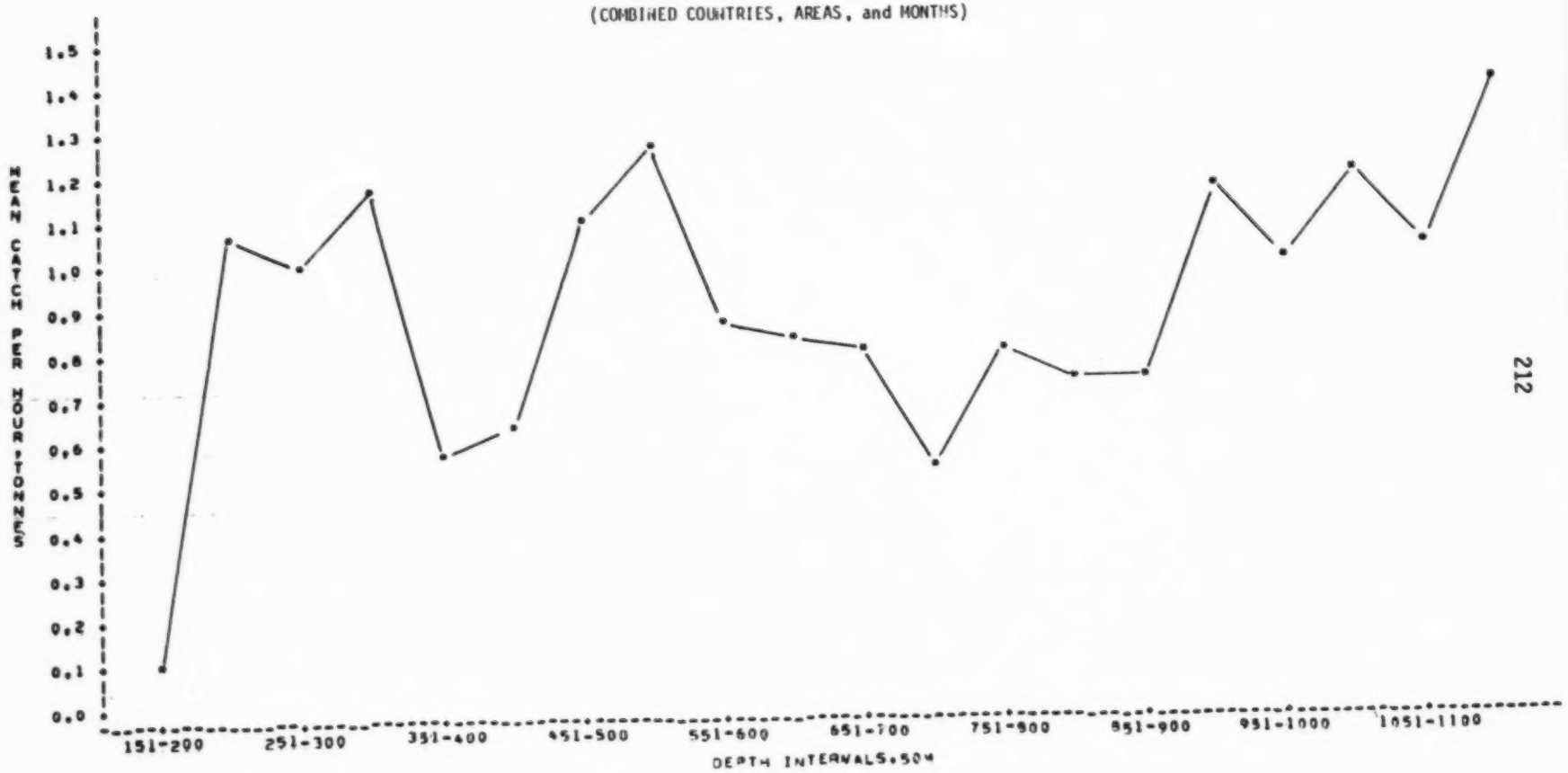


Fig. 3. CATCH PER NET AT DEPTH,1983
DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2J
PLOT OF AVGC_NET*AVDEPTH SYMBOL USED IS *

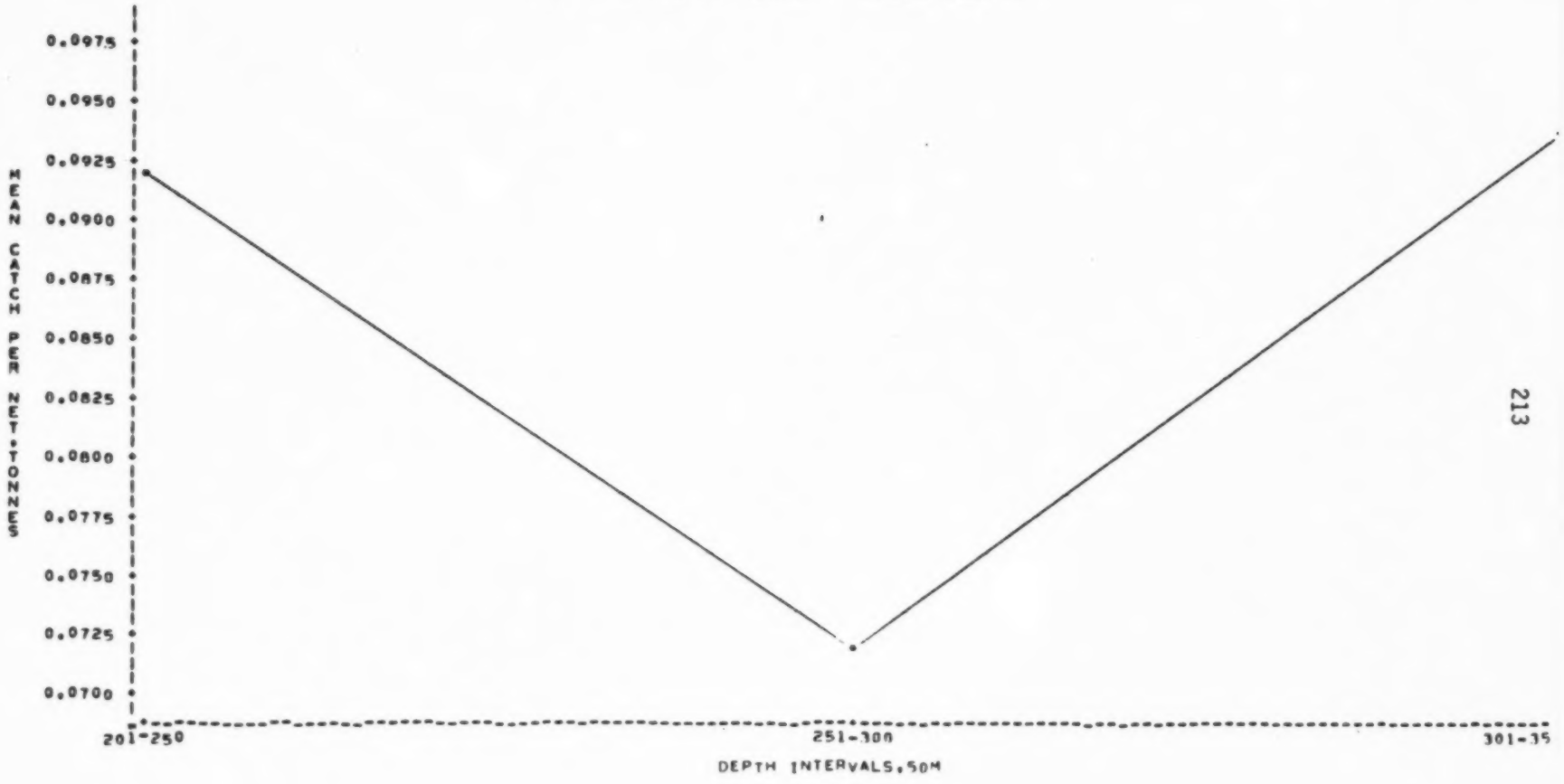


Fig. 3. CATCH PER NET AT DEPTH,1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=OCT NAFO=2J

PLOT OF AVGC_NET*AVDEPTH SYMBOL USED IS *

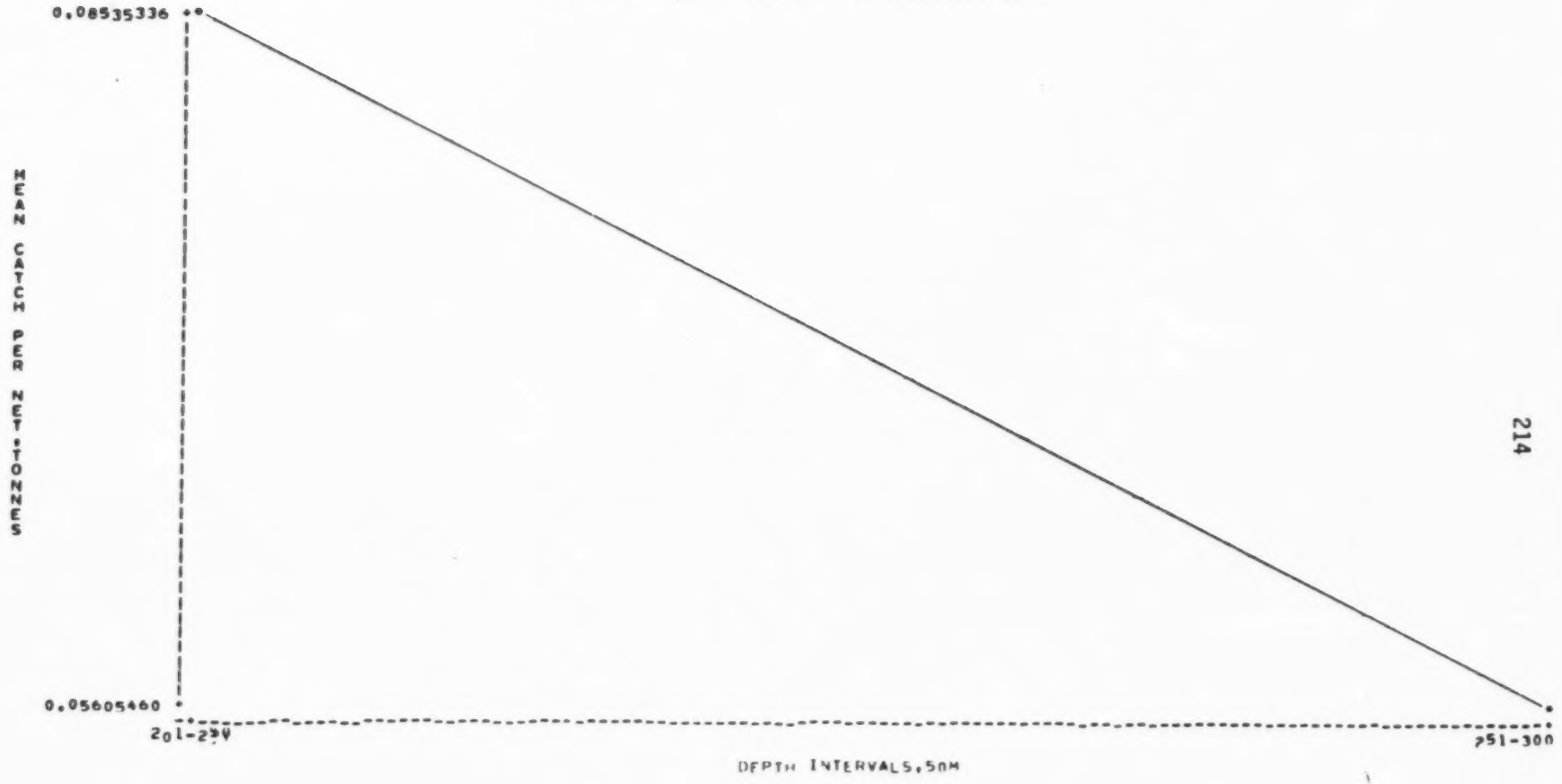


Fig. 3. CATCH PER NET AT DEPTH,1983

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=NOV YAFD=2J

PLOT OF AVGC_NET*AVDEPTH SYMBOL USED IS *

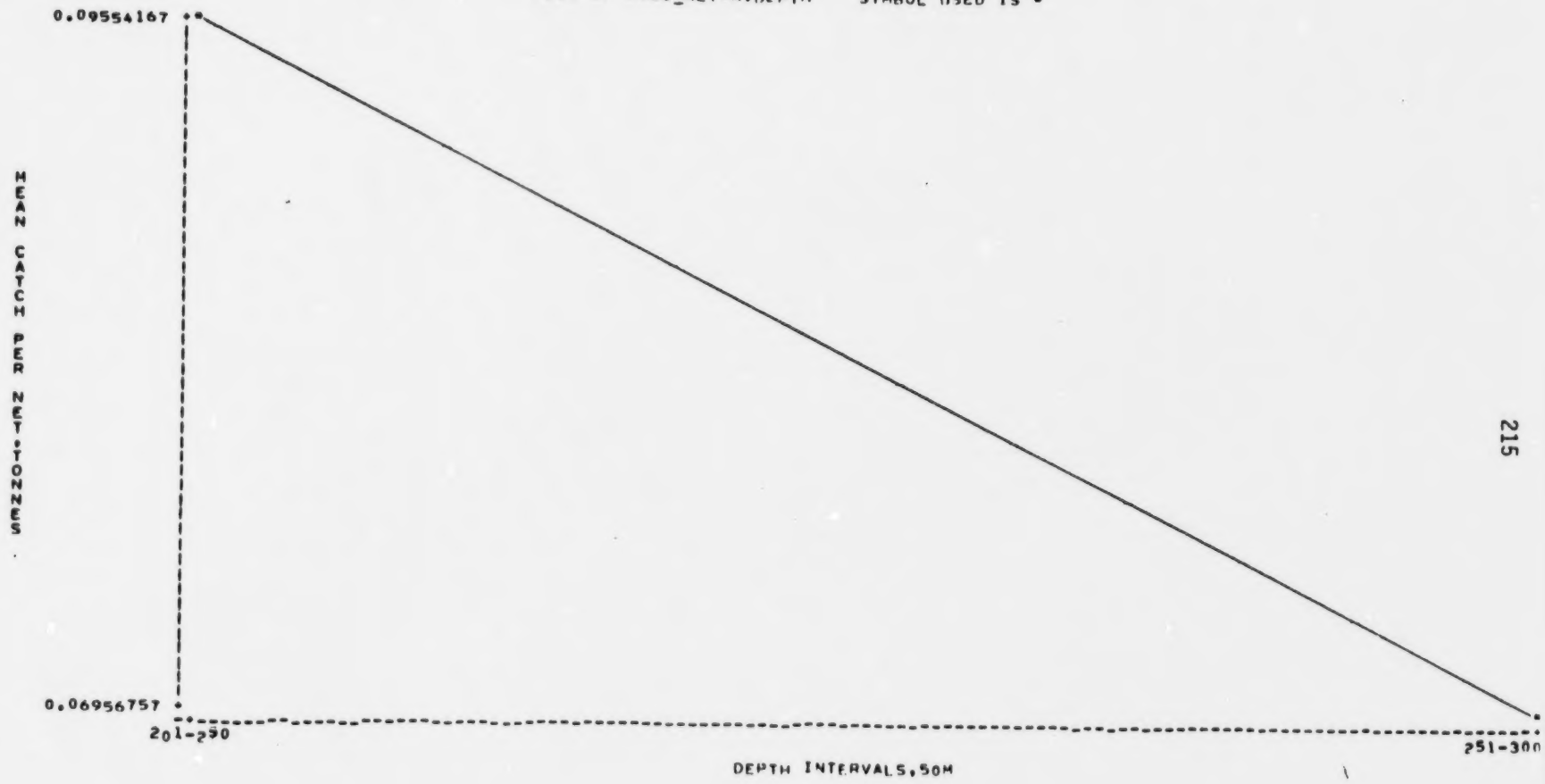


Fig. 4. CATCH PER HOUR AT DEPTH,1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=MAY NAFO=3K

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

Fig. 4. CATCH PER HOUR AT DEPTH,1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=JULY NAFO=3K

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

Fig. 4. CATCH PER HOUR AT DEPTH,1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2H

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

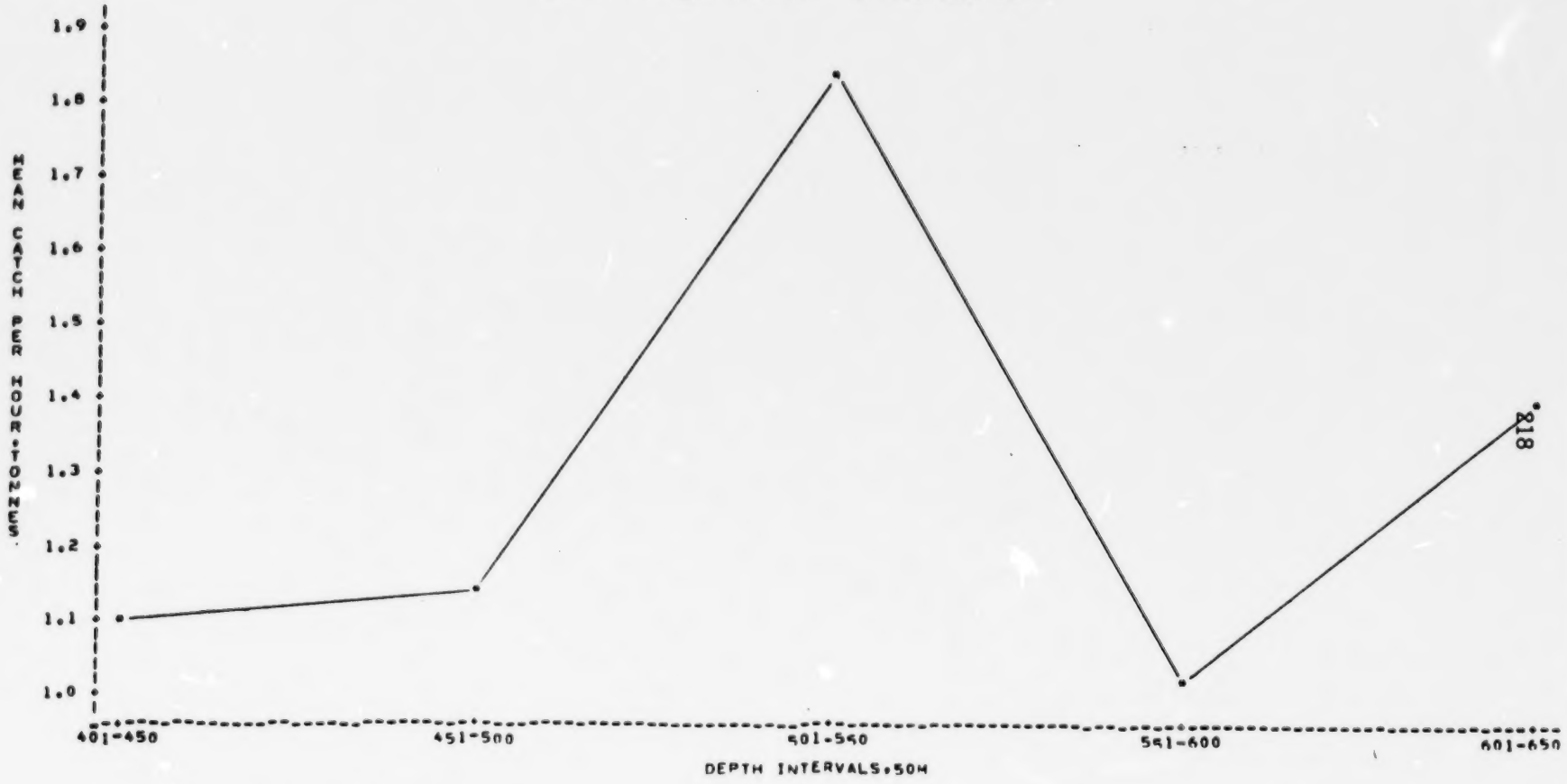


Fig. 4. CATCH PER HOUR AT DEPTH,1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG NAFO=2J

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

Fig. 4. CATCH PER HOUR AT DEPTH,1984
DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT YAFO=2H
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

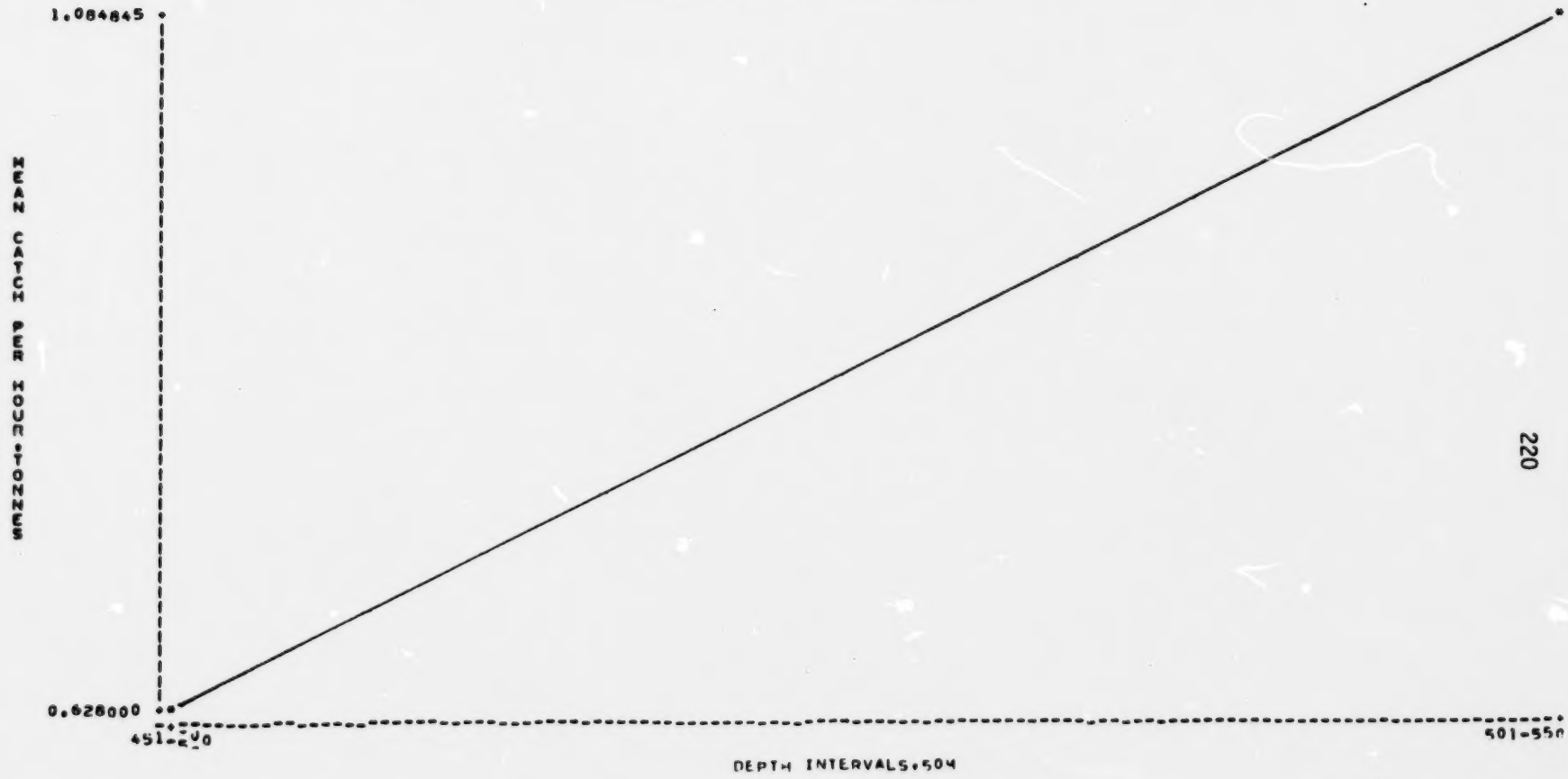


Fig. 4. CATCH PER HOUR AT DEPTH,1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT VAFO=2J

PLOT OF AVGC_HR=AVDEPTH SYMBOL USED IS *

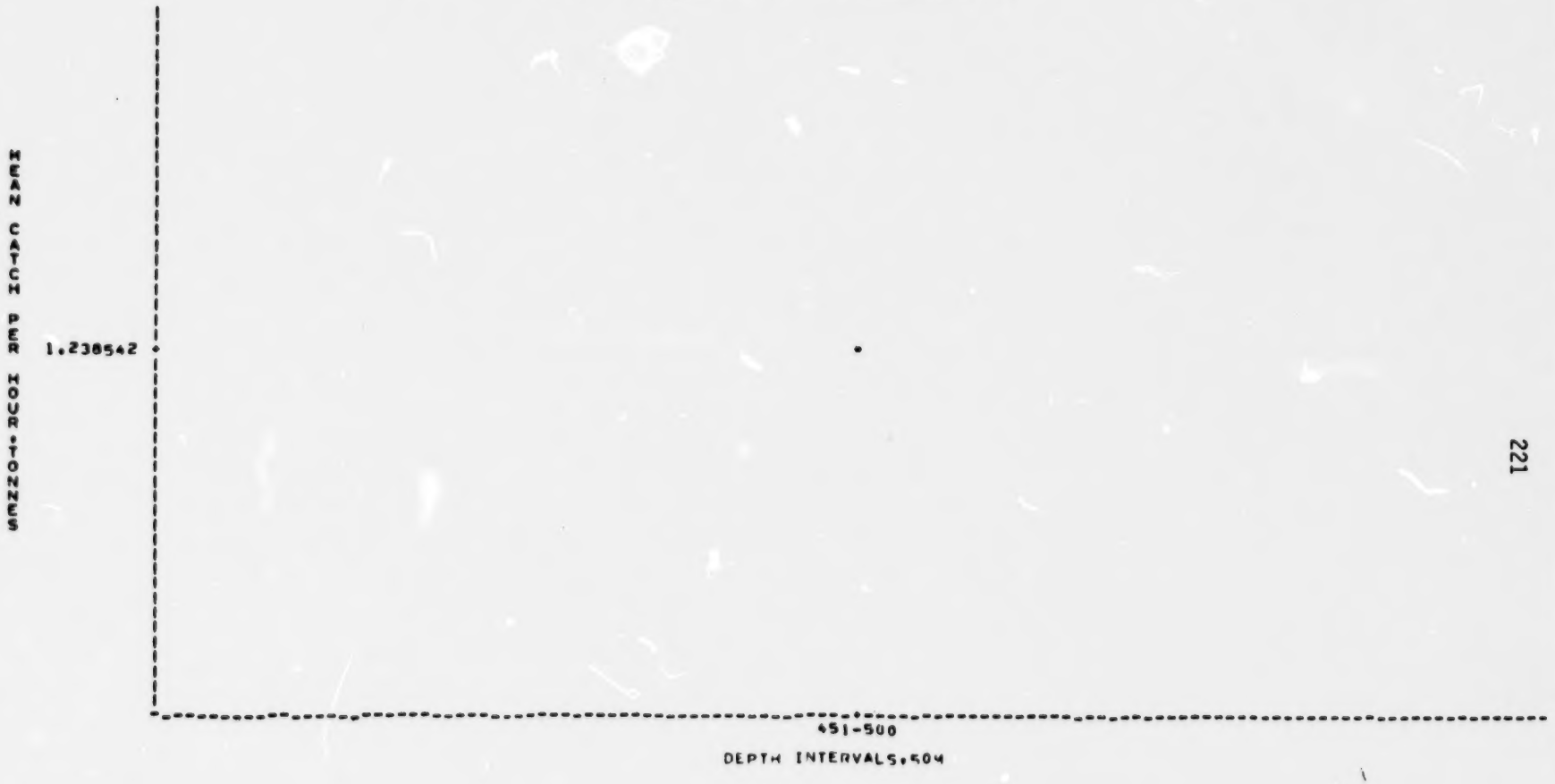


Fig. 4. CATCH PER HOUR AT DEPTH,1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT YAFD=3K

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

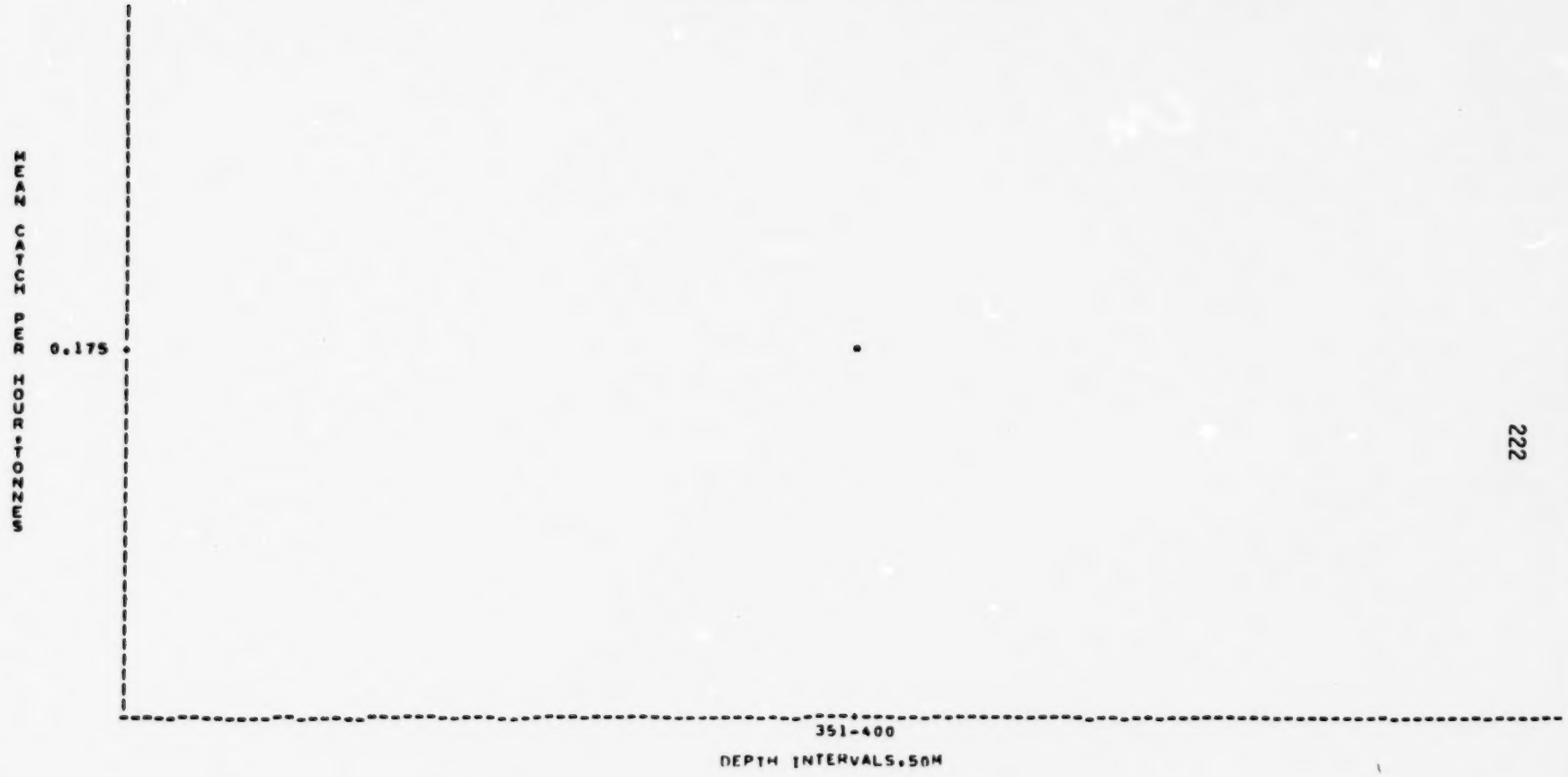


Fig. 4. CATCH PER HOUR AT DEPTH,1984
DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=2J
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

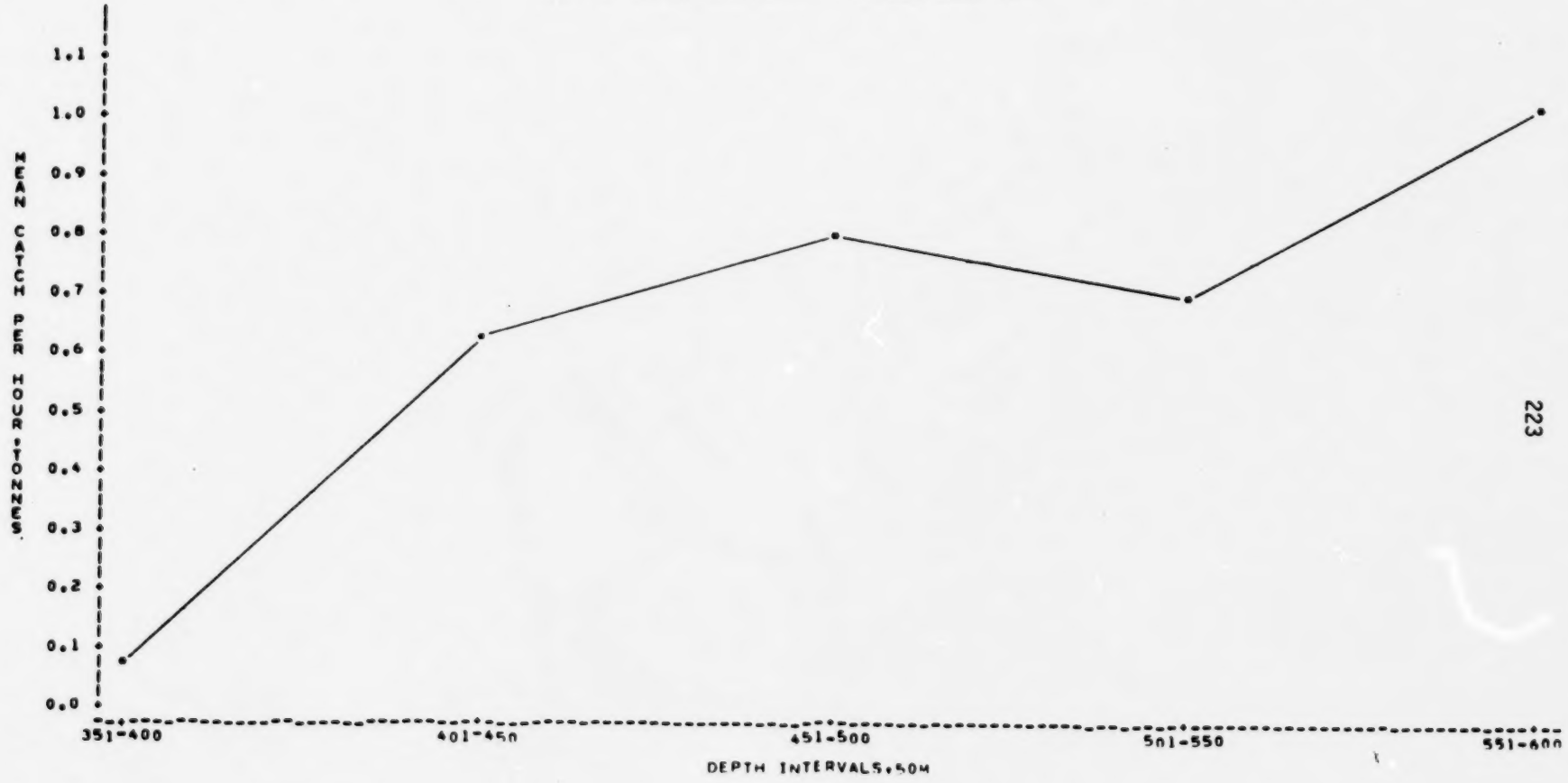


Fig. 4. CATCH PER HOUR AT DEPTH,1984
DIRECT=TURBOT COUNTRY=JAPAN MONTH=SEPT NAFO=3K
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

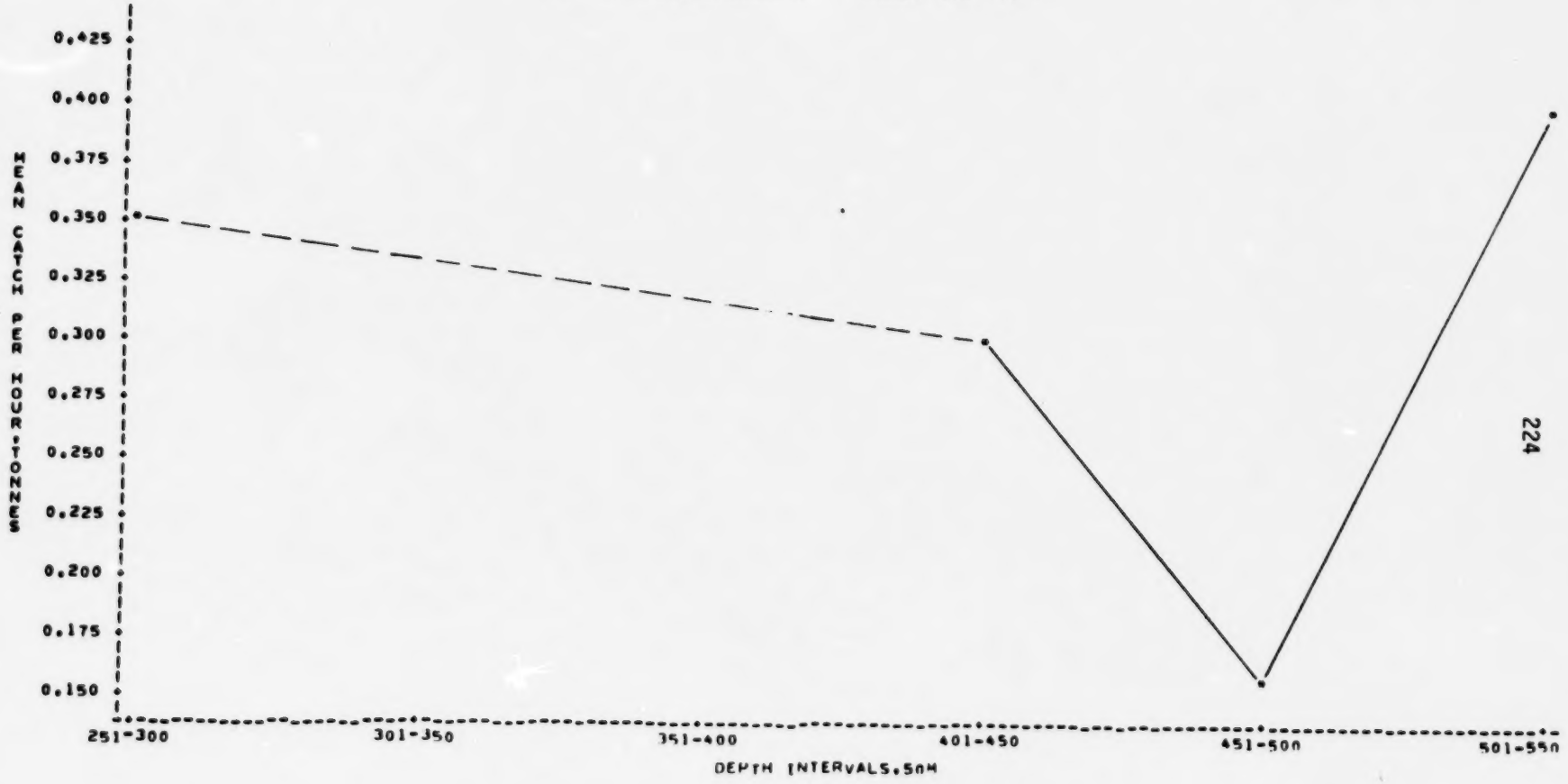


Fig. 4. CATCH PER HOUR AT DEPTH,1984
DIRECT=TURBOT COUNTRY=JAPAN MONTH=NOV NAFO=2J
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

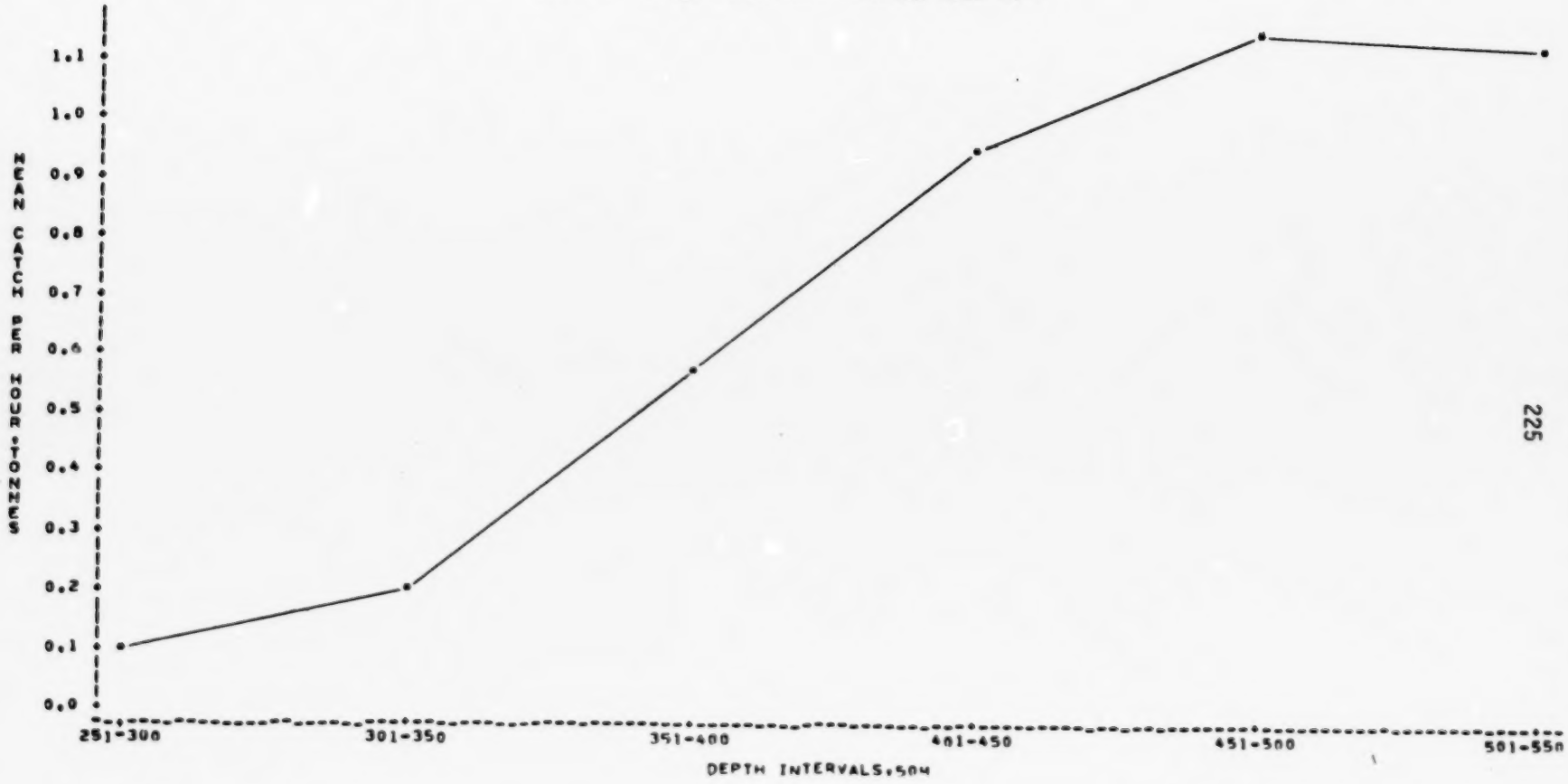


Fig. 4. CATCH PER HOUR AT DEPTH,1984
DIRECT=TURBOT COUNTRY=JAPAN MONTH=NOV NAFO=3K
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

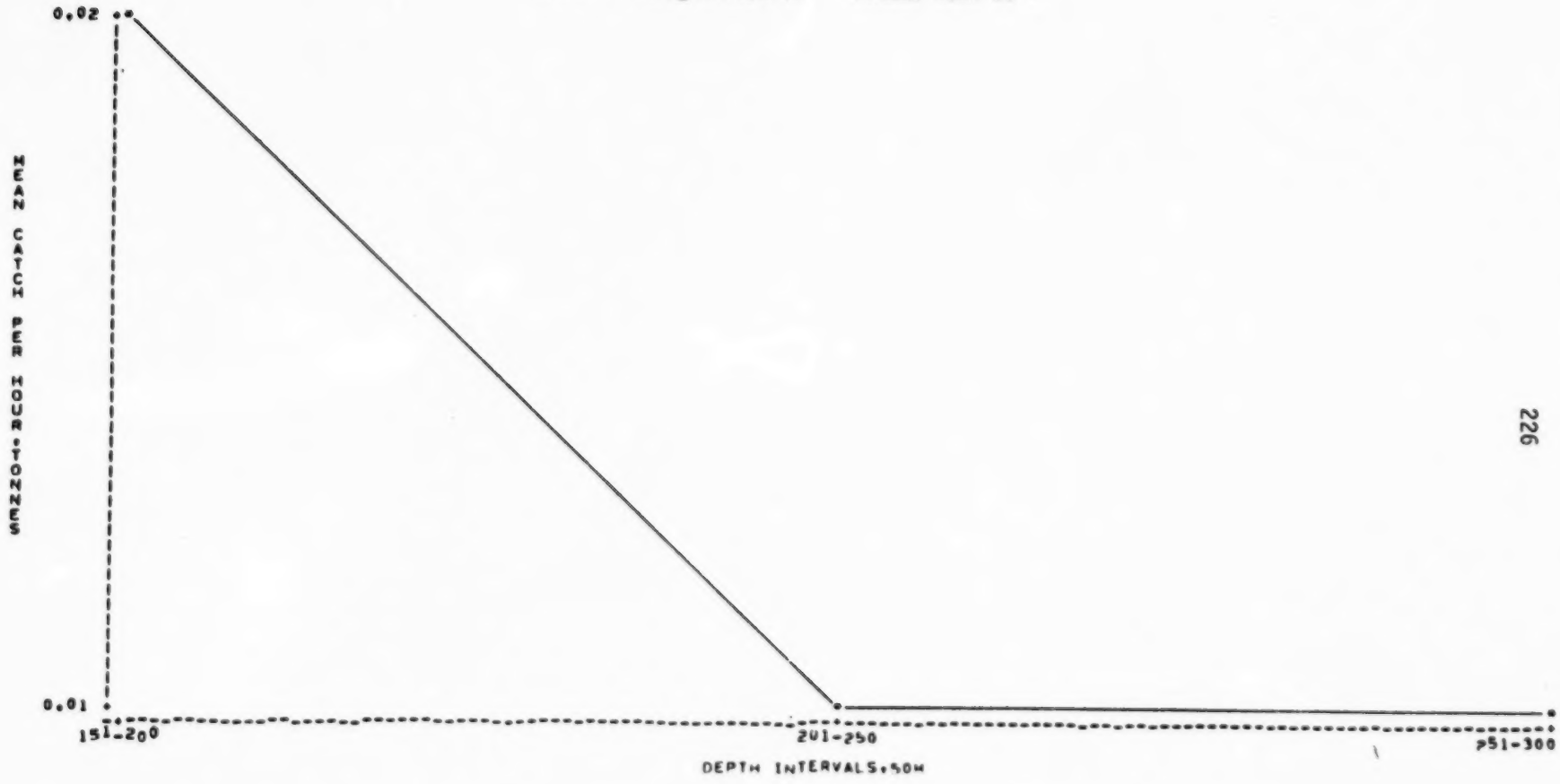


Fig. 4. CATCH PER HOUR AT DEPTH,1984

DIRECT=TURBOT COUNTRY=JAPAN MONTH=DEC NAFO=2J

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

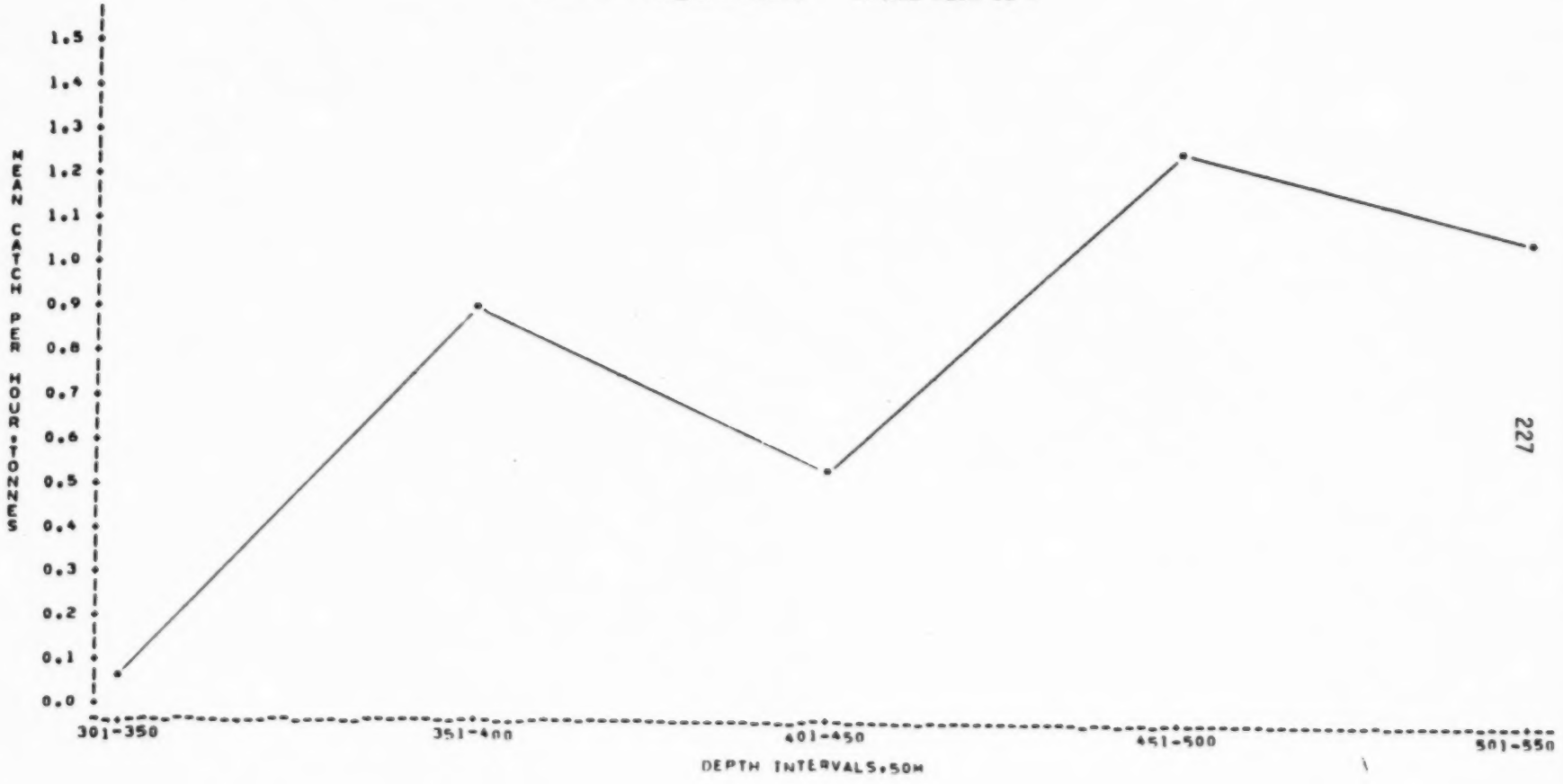


Fig. 4. CATCH PER HOUR AT DEPTH,1984
DIRECT=TURBOT COUNTRY=POLAND MONTH=MAY NAFO=3K
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

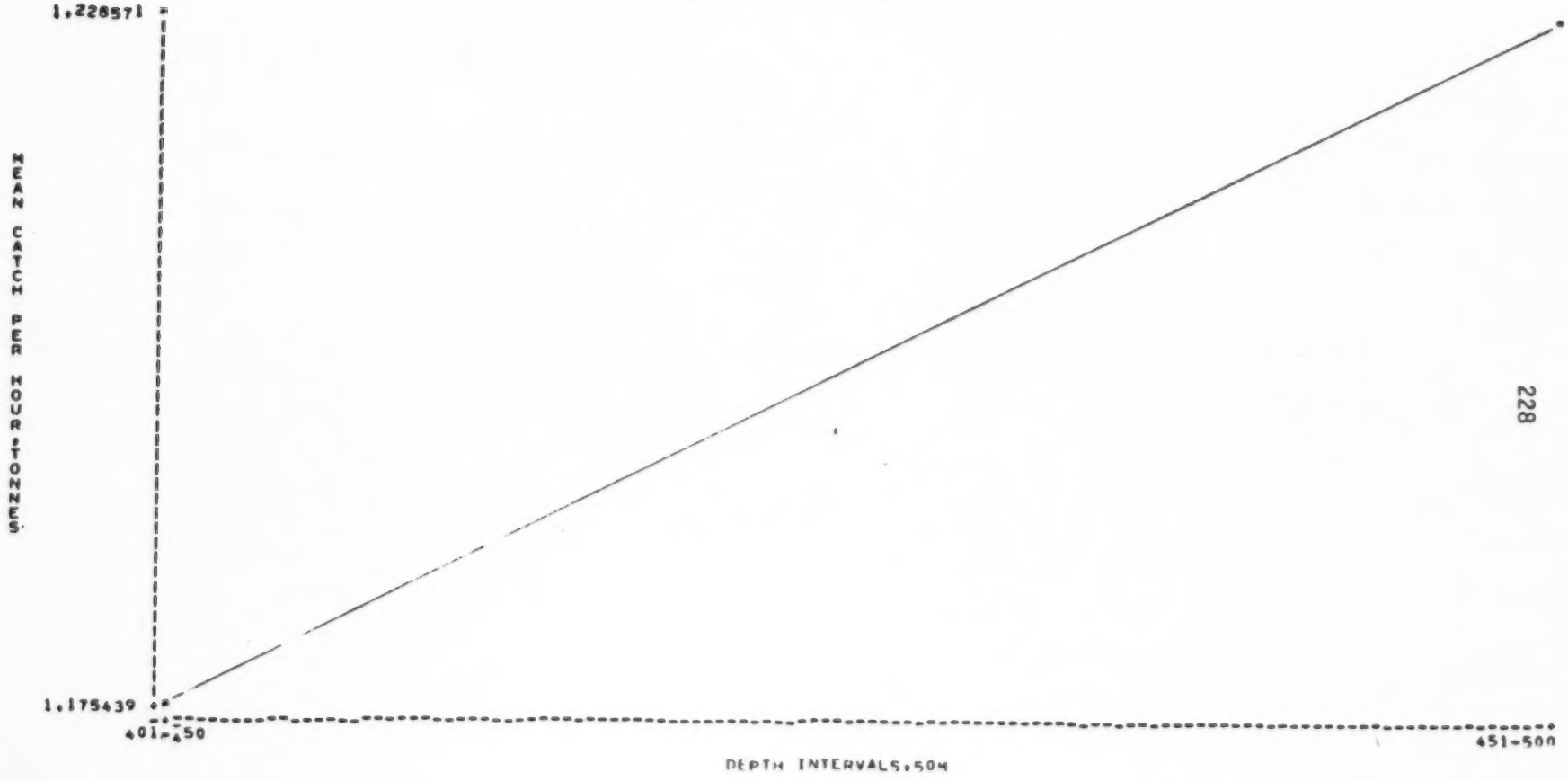


Fig. 4. CATCH PER HOUR AT DEPTH,1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=JUNE NAFO=3K

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

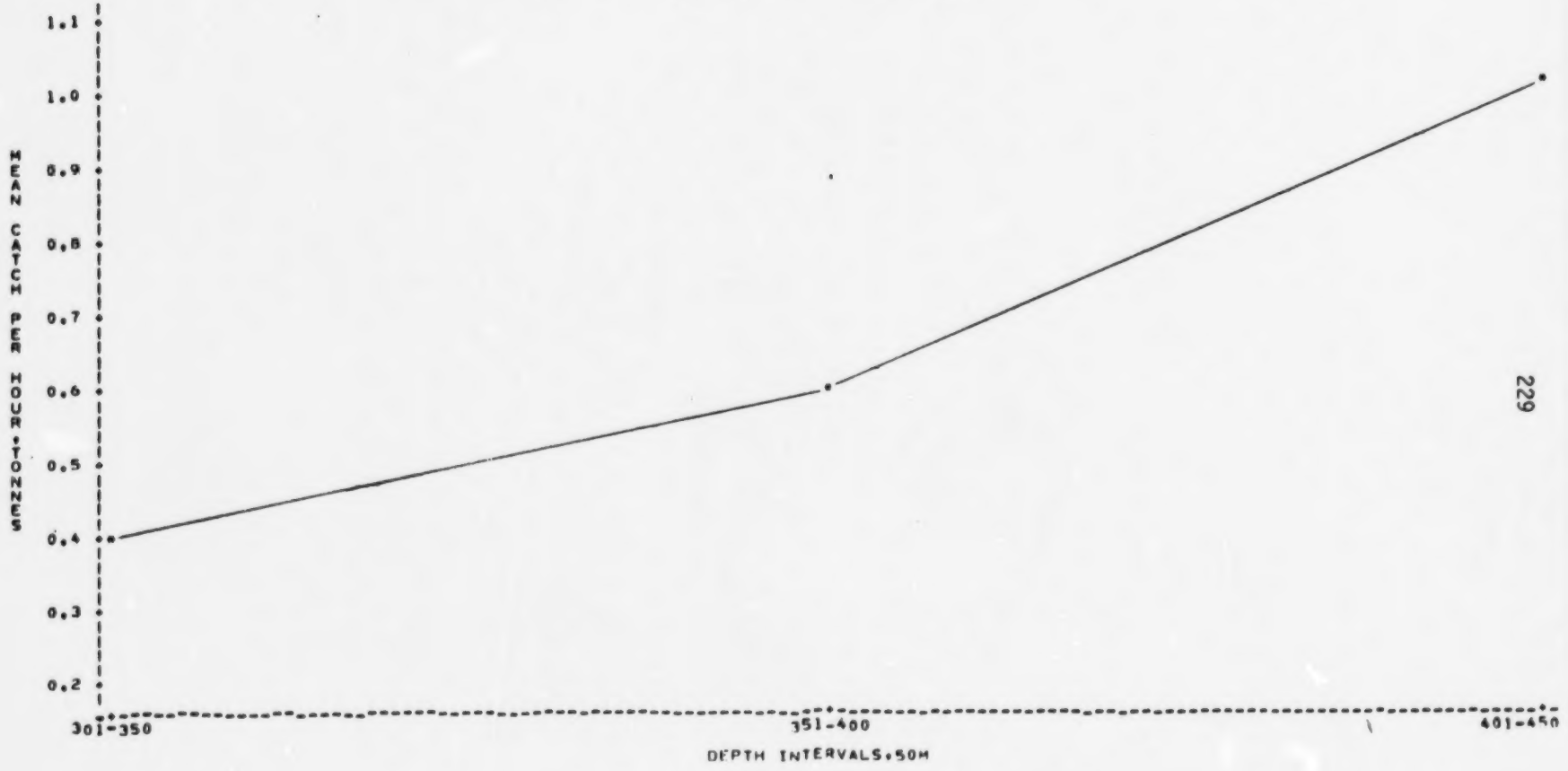


Fig. 4. CATCH PER HOUR AT DEPTH,1984
DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2G
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

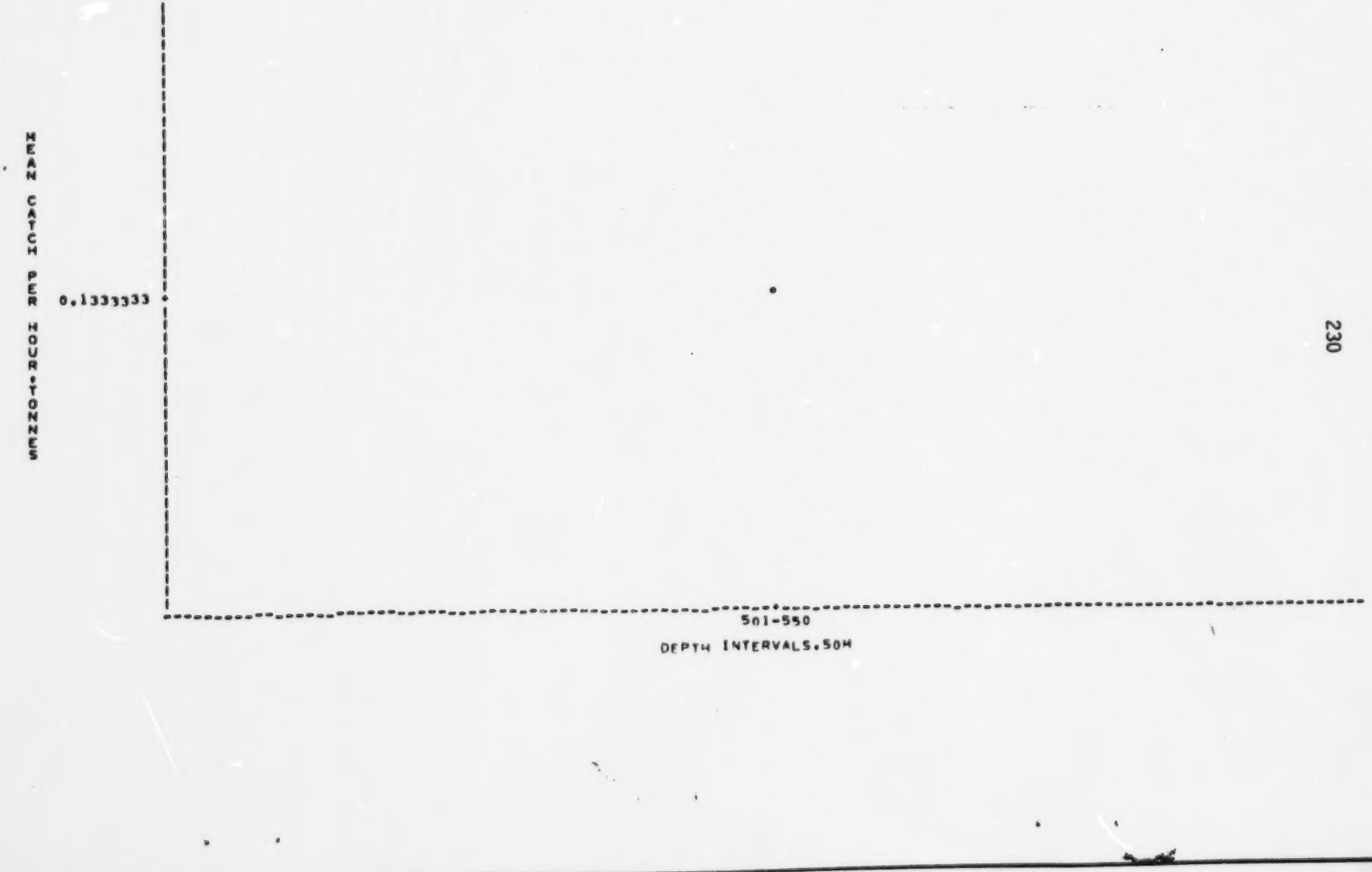


Fig. 4. CATCH PER HOUR AT DEPTH,1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=NOV NAFO=2H

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

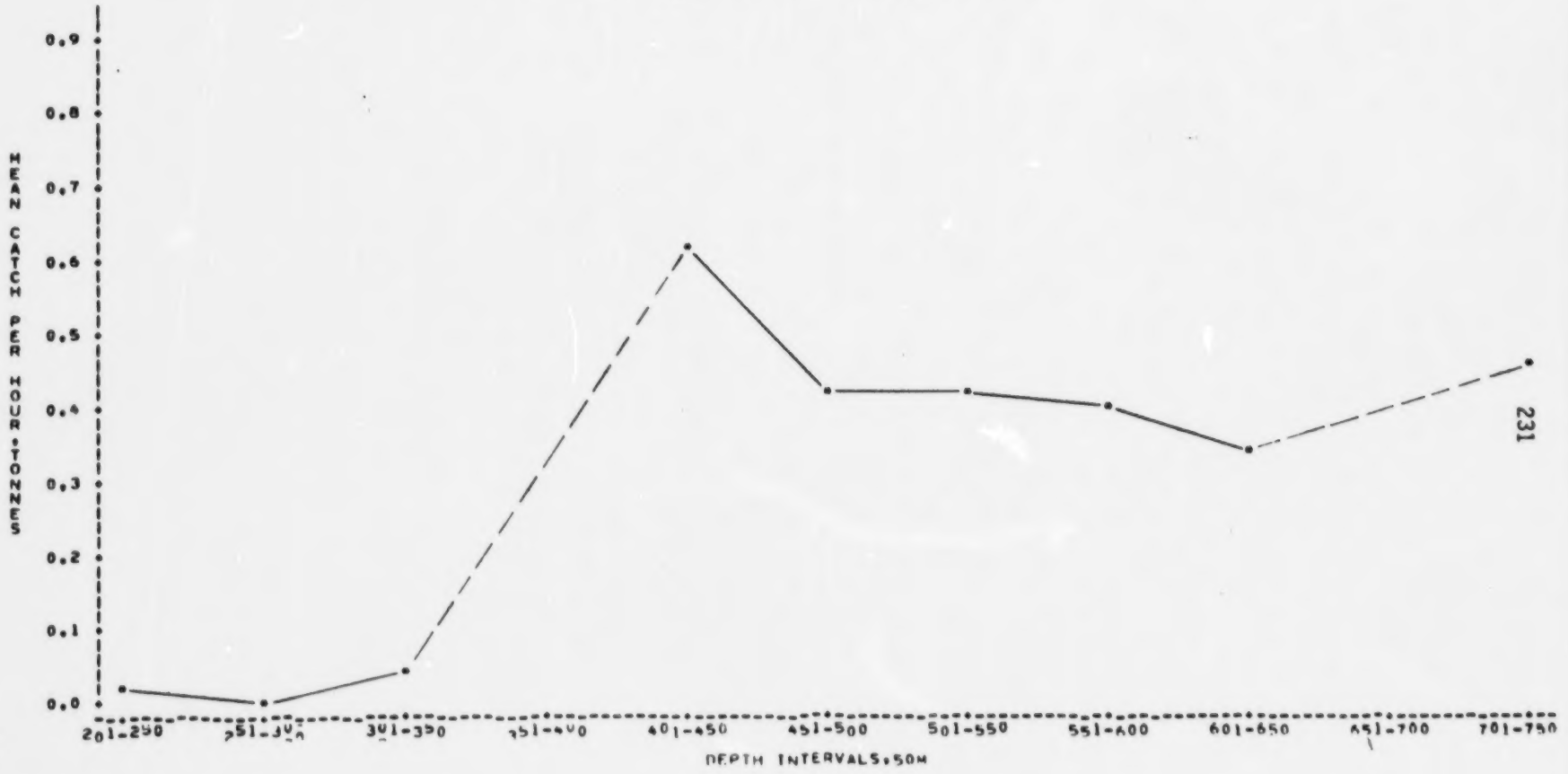


Fig. 4. CATCH PER HOUR AT DEPTH,1984

DIRECT=TURBOT COUNTRY=POLAND MONTH=DEC NAFO=2H

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

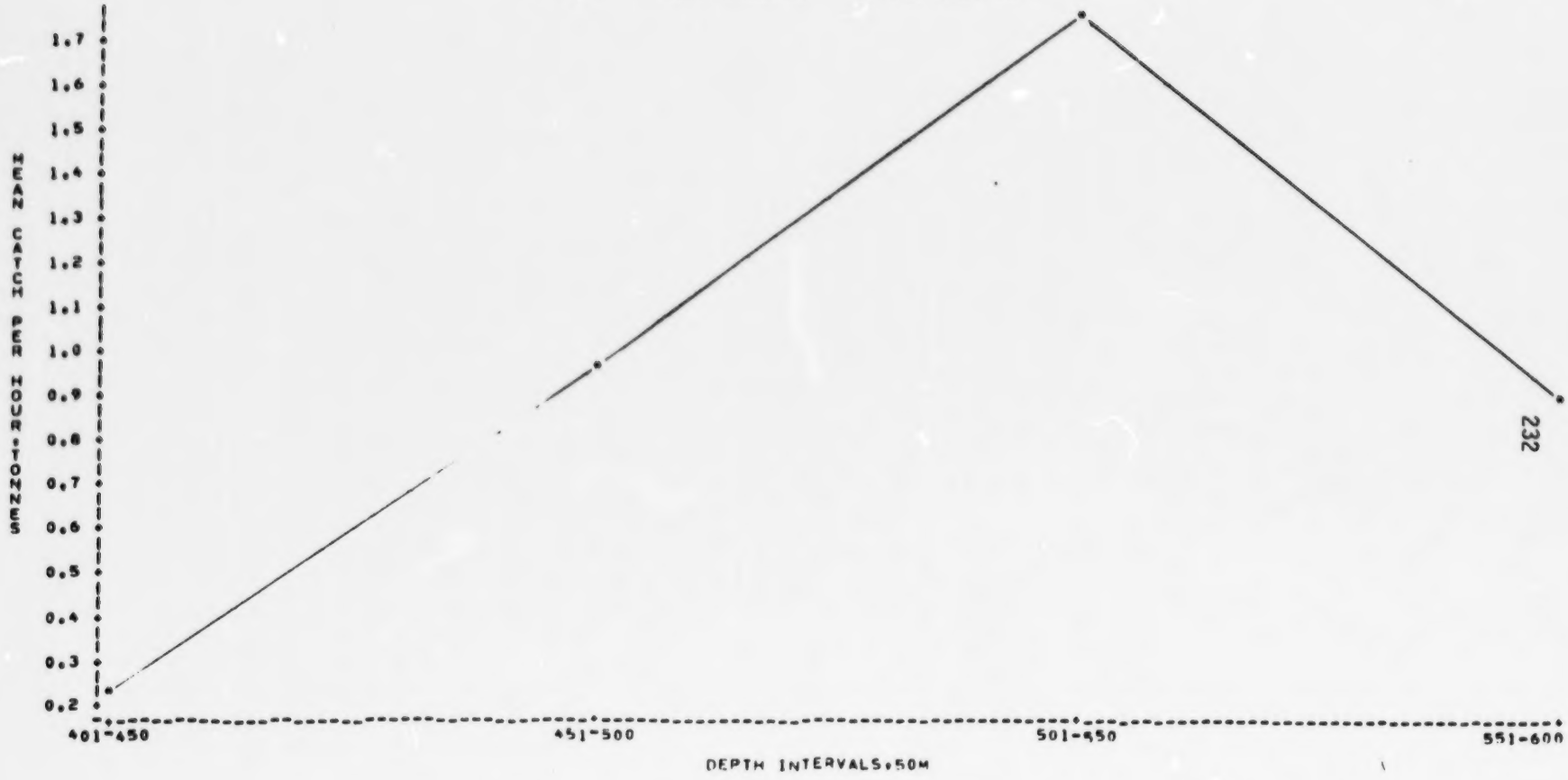


Fig. 4. CATCH PER HOUR AT DEPTH,1984
DIREC1=TURBOT COUNTRY=PORTUGAL MONTH=DEC NAFO=3L
PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

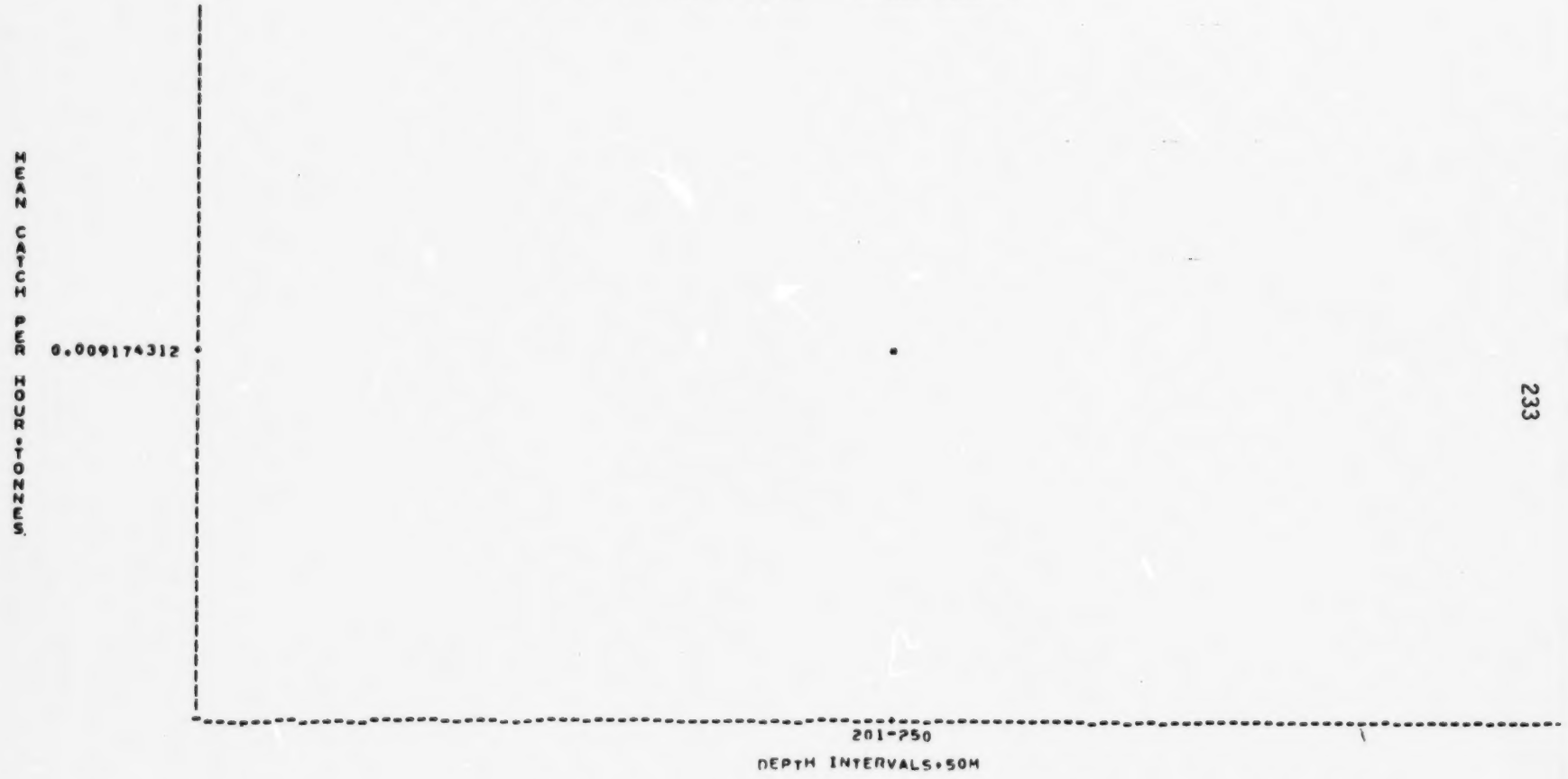


Fig. 4. CATCH PER HOUR AT DEPTH,1984

DIRECT=TURBOT

PLOT OF AVGC_HR*AVDEPTH SYMBOL USED IS *

(COMBINED COUNTRIES, AREAS, AND MONTHS)

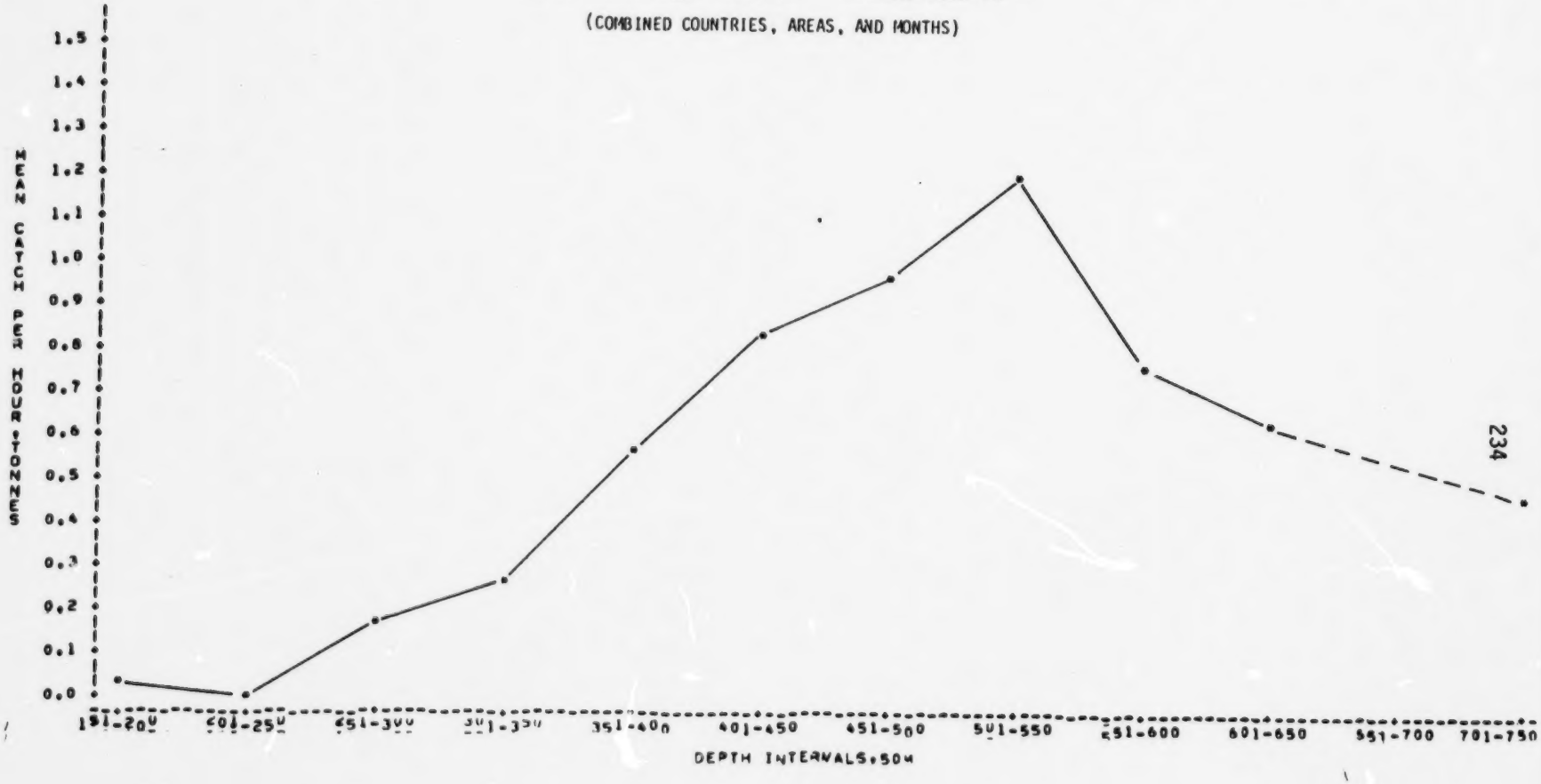


Fig. 4. CATCH PER NET AT DEPTH,1984
DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=AUG VAFO=2J
PLOT OF AVGC_NET*AVDEPTH SYMBOL USED IS *

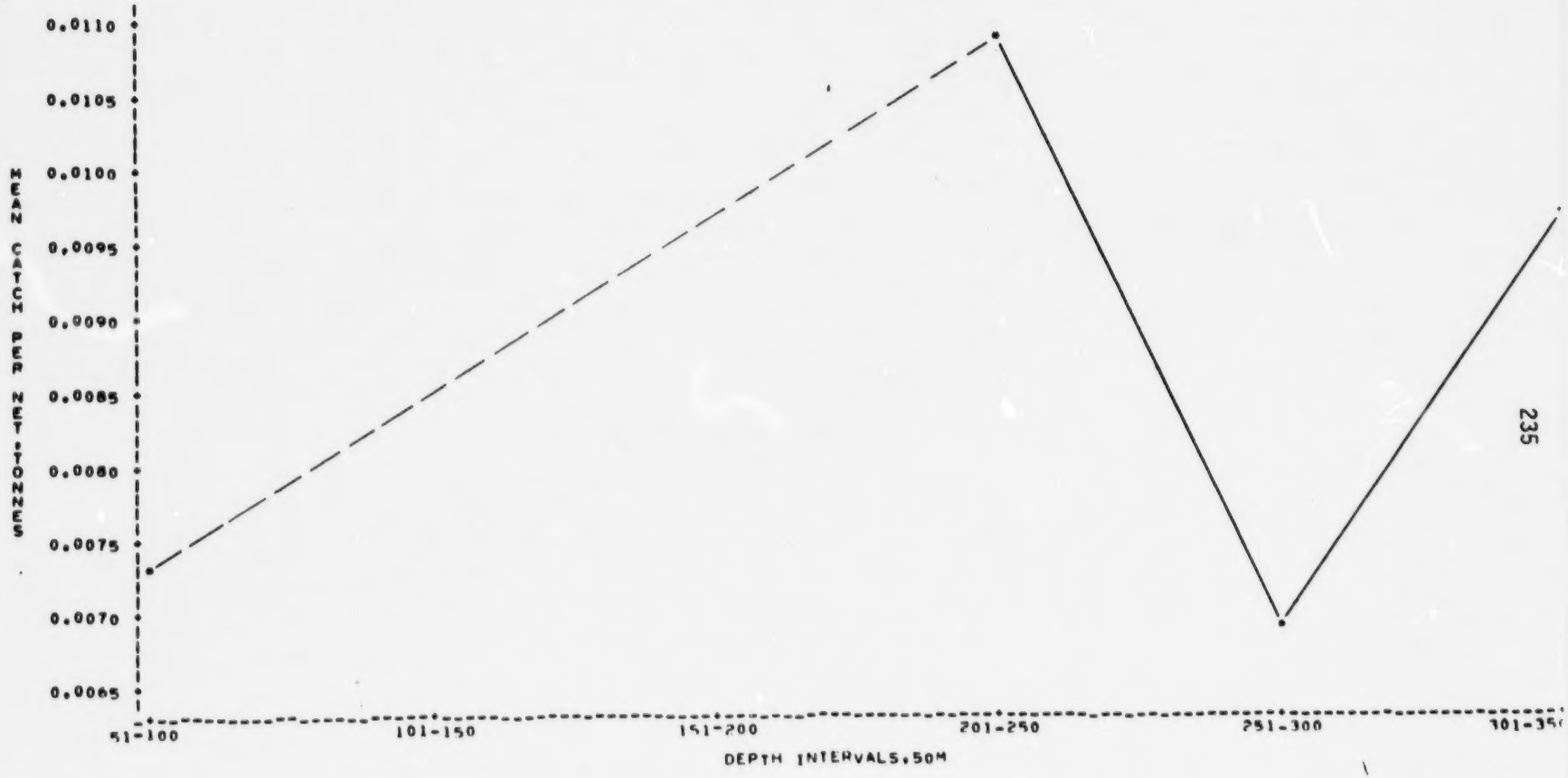


Fig. 4. CATCH PER NET AT DEPTH.1984
DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=SEPT NAFO=2J
PLOT OF AVGC_NET*AVDEPTH SYMBOL USED IS *

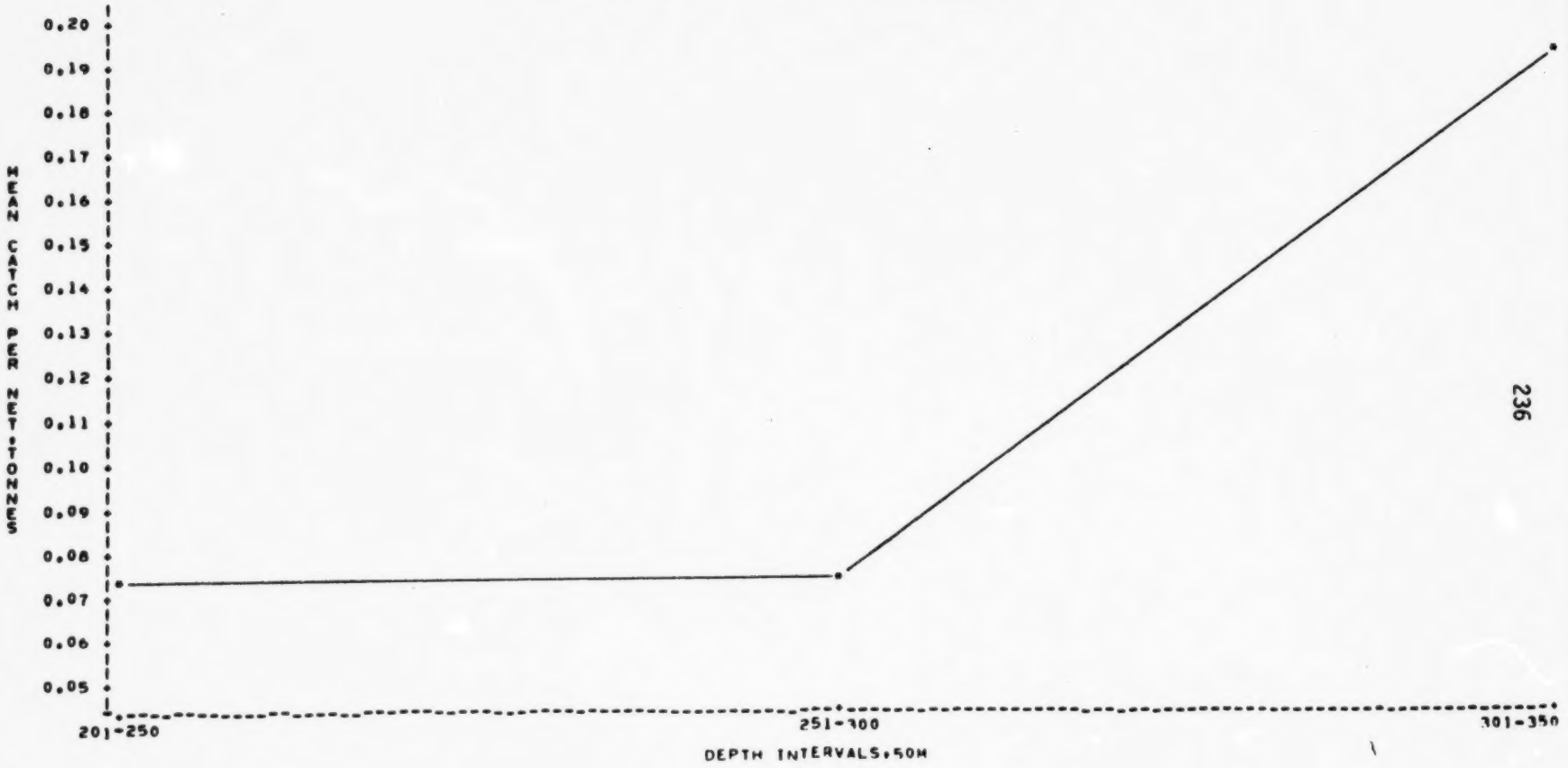


Fig. 4. CATCH PER NET AT DEPTH.1984
DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=OCT NAFO=2J
PLOT OF AVGC_NET*AVDEPTH SYMBOL USED IS *

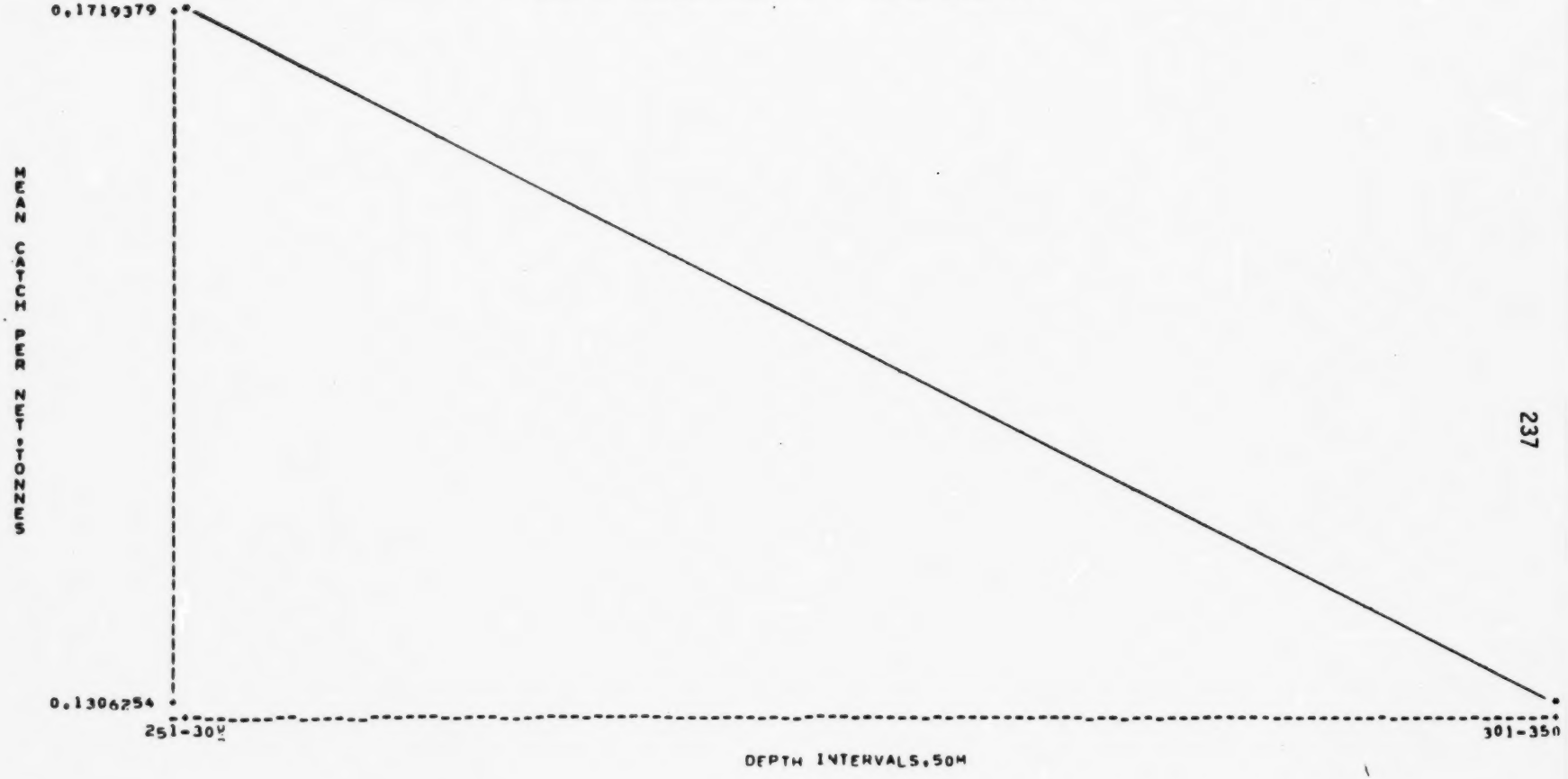
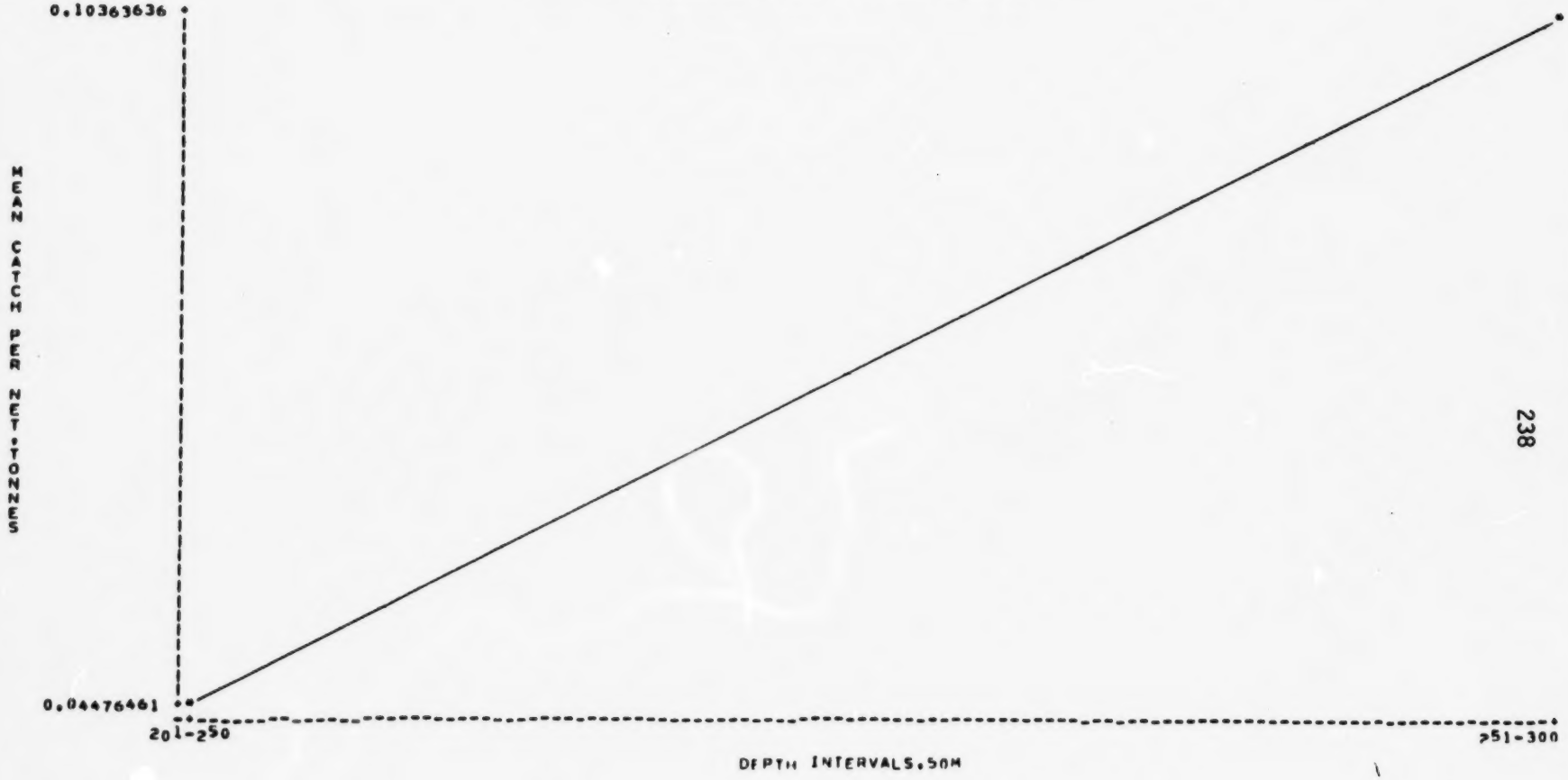


Fig. 4. CATCH PER NET AT DEPTH,1984

DIRECT=TURBOT COUNTRY=CANADANFLD MONTH=NOV NAFO=2J

PLOT OF AVGC_NET*AVDEPTH SYMBOL USED IS *



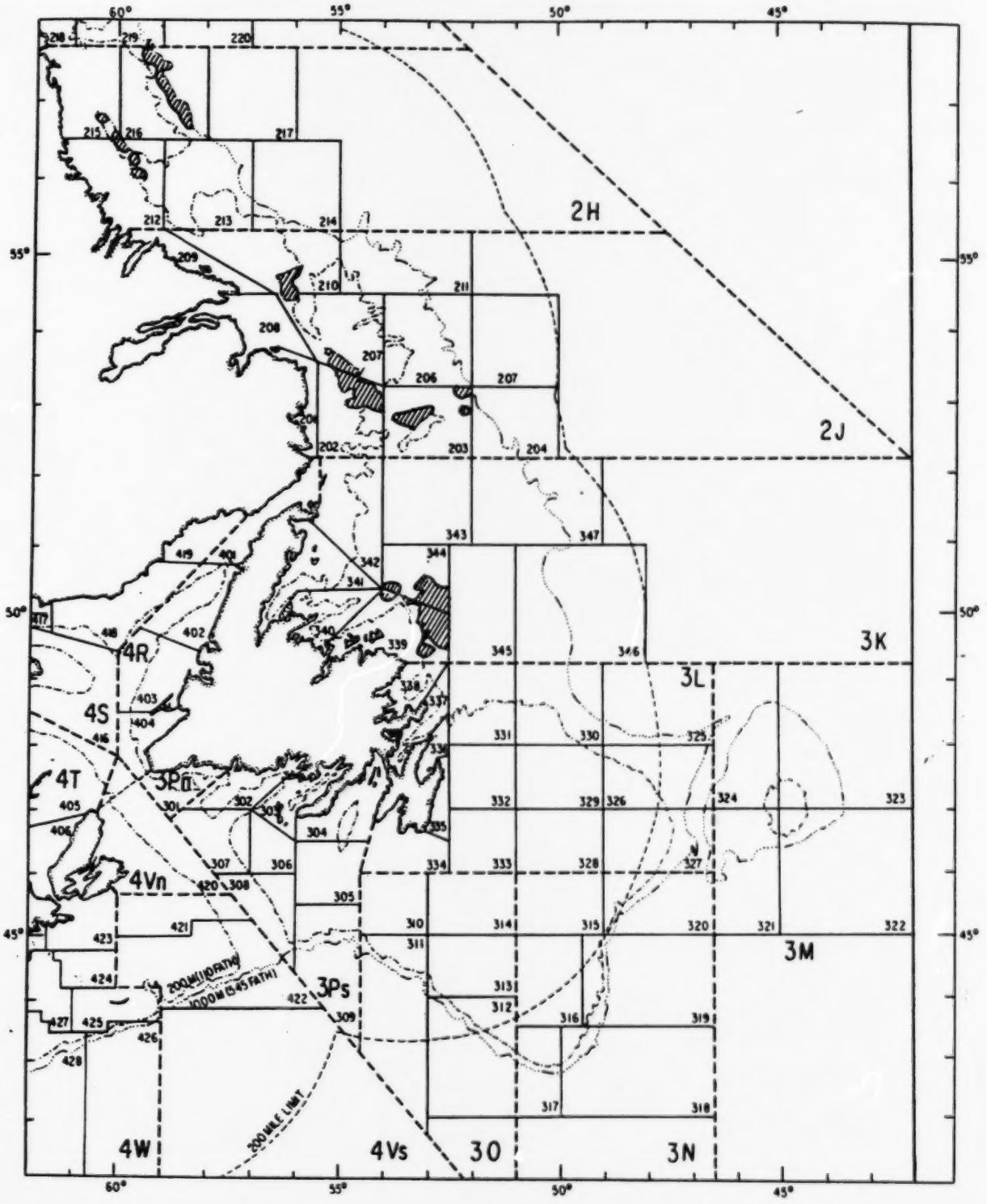


Fig. 5. Best observed effort locations in 1983 with respect to high catch rates and low by-catch.

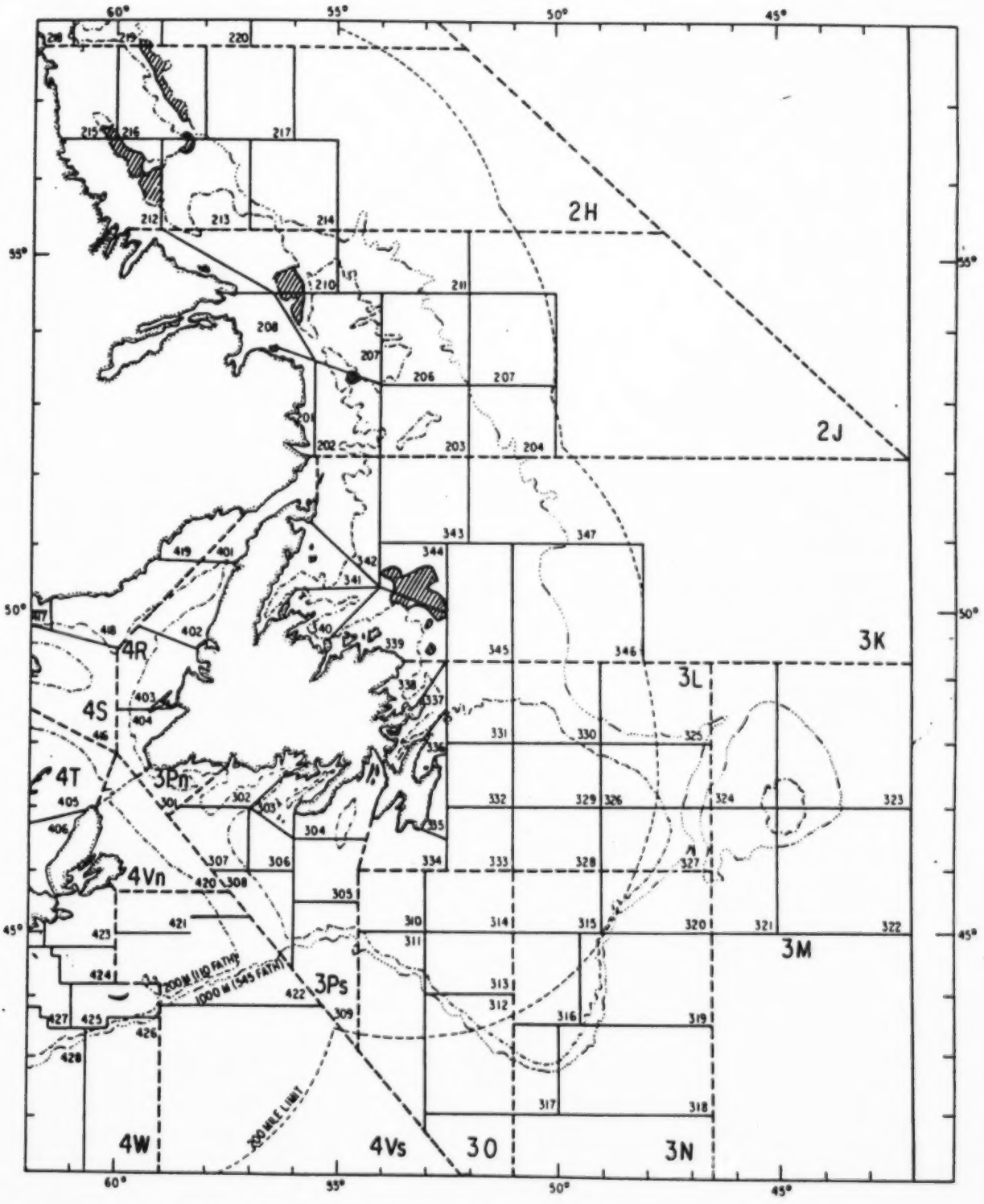


Fig. 6. Best observed effort locations in 1984 with respect to high catch rates and low by-catch.